

**MEMBER AGENCIES:**

Alameda

Alameda County

Alameda County Flood  
Control and Water  
Conservation District

Albany

Berkeley

Dublin

Emeryville

Fremont

Hayward

Livermore

Newark

Oakland

Piedmont

Pleasanton

San Leandro

Union City

Zone 7 of the Alameda  
County Flood Control  
District

# ***STORMWATER QUALITY MANAGEMENT PLAN***

***July 2001 – June 2008***



**Alameda Countywide  
Clean Water Program**

A Consortium of Local Agencies



## **TABLE OF CONTENTS**

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<b><u>Section 1.0 Introduction and Background</u></b> .....	<b>1 - 1</b>
History of the Clean Water Act .....	1 - 1
Porter-Cologne Water Quality Control Act .....	1 - 2
Recent Developments .....	1 - 2
<b><u>Section 2.0 Program Description</u></b> .....	<b>2 - 1</b>
Mission, Vision, and Strategic Objectives.....	2 - 1
Program Structure .....	2 - 1
Program Achievements .....	2 - 2
Evolution of the Program.....	2 - 3
<b><u>Section 3.0 Component Objective and Tasks</u></b> .....	<b>3 - 1</b>
Planning and Regulatory Compliance .....	3 - 1
Watershed Assessment .....	3 - 4
Monitoring and Special Studies.....	3 - 8
Public Information and Participation.....	3 - 12
Municipal Maintenance Activities .....	3 - 15
New Development and Construction Controls.....	3 - 18
Illicit Discharge Controls .....	3 - 22
Industrial/Commercial Discharge Controls .....	3 - 25
<b><u>Section 4.0 Pollutants of Concern</u></b> .....	<b>4 - 1</b>
Diazinon .....	4 - 1
Mercury .....	4 - 5
Copper.....	4 - 9
Polychlorinated Biphenyls .....	4 - 10
<b><u>Section 5.0 Performance Standards</u></b> .....	<b>5 - 1</b>
Public Information and Participation.....	5 - 3
Municipal Maintenance .....	5 - 8
New Development and Construction Site Controls.....	5 - 17
Illicit Discharge Controls .....	5 - 22
Industrial and Commercial Discharge Controls .....	5 - 26

### **References**

**Appendix A: Memorandum of Agreement**

**Appendix B: General Program Tasks and Budget for FY 2001/02**

**Appendix C: Pollutant Reduction Plans**

**Appendix D: Figure D-1. Alameda County Municipalities**

**Figure D-2. Major Open Creeks and Waterbodies in Alameda County**

**Figure D-3. Boundaries of Alameda County watersheds**

## **ACRONYMS**

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ACCWP	Alameda Countywide Clean Water Program
BASMAA	Bay Area Stormwater Management Agencies Association
BMPs	Best Management Practices
CDPR	California Department of Pesticide Regulation
CWA	Clean Water Act
DTSC	Department of Toxic Substances Control
FIFRA	Federal Insecticide, Fungicide and Rodenticide Act
FY	Fiscal Year
GBP	Green Business Program
GIS	Geographic Information Systems
HHW	Household Hazardous Waste
I&IDC	Industrial and Illicit Discharge Control
II&ID	Illicit Discharge Controls and Industrial/Commercial Discharge Controls
IPM	Integrated Pest Management
MOA	Memorandum of Understanding
NAS	National Academy of Sciences
NPDES	National Pollutant Discharge Elimination System
P <sup>2</sup>	Pollution Prevention
PCBs	Polychlorinated biphenyls
PCOs	Pest Control Operators
PI/P	Public Information and Participation
PRPs	Pollutant Reduction Plans
RMAS	Regional Monitoring and Assessment Strategy
RMP	Regional Monitoring Program for Trace Substances
SUSMPs	Standard Urban Stormwater Mitigation Plans
SWMM	Storm Water Management Model
TIEs	Toxicity Identification Evaluations
TMDL	Total Maximum Daily Load
U.S. EPA	United States Environmental Protection Agency
WAMS	Watershed Assessment and Monitoring Subcommittee

## ***DEFINITIONS***

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Act	Porter-Cologne Water Quality Control Act
BMPs	Best Management Practices – Practices Implemented by private industry and public agencies which prevent or reduce water pollution.
District	Alameda County Flood Control and Water Conservation District
Plan	Stormwater Quality Management Plan
Program	Alameda County Clean Water Program
Regional Board	California Regional Water Quality Control Board, San Francisco Bay Region
Stakeholders	People that live and work in a watershed
State Board	State Water Resources Control Board



# **SECTION 1**

# **INTRODUCTION AND BACKGROUND**

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## **INTRODUCTION**

The Alameda Countywide Clean Water Program (Program) is a consortium of agencies within Alameda County that discharge stormwater to the San Francisco Bay. This Stormwater Quality Management Plan (Plan) describes the Program's approach to reducing stormwater pollution.

There are five major sections to the Plan. The Background provides a brief history of water quality regulations. The Program Description describes the structure, accomplishments, and recent developments of the Program. The Component Work Plans describe the objectives and tasks of each Program component. The Pollution Reduction Plans describe the actions the Program and the member agencies will take to address specific pollutants that are impairing water quality. Lastly, the Performance Standards list specific tasks that the member agencies are required to perform.

The Plan for FY 2001/02 through 2007/08 is the Program's third stormwater quality management plan and will serve as the basis of the Program's third stormwater discharge permit from the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Board). The Plan was submitted to the Regional Board 180 days prior to the expiration of the Program's second permit on February 19, 2002. The federal Clean Water Act (1972) requires stormwater dischargers to reduce pollutants to the maximum extent practicable. The Plan, in conjunction with the permit adopted

by the Regional Board, is designed to enable the consortium to meet that requirement.

## **BACKGROUND**

### ***HISTORY OF THE CLEAN WATER ACT***

By the late 1960s, urbanization and industrialization had taken a toll on the nation's waters: many rivers and bays were visibly polluted. In response to growing public concern over water pollution, Congress passed the Clean Water Act (1972). The goals of the Clean Water Act are to restore the biological, physical, and chemical integrity of our nation's waters and to make all of our waters fishable and swimmable.

Section 402 of the Clean Water Act (CWA) established the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit program set nationwide permitting requirements for discharging pollutants into waterways. The limits varied by category of industry and were based on a level of treatment that was achievable using the best available technology. The 1987 amendments to the CWA required that municipal stormwater discharges obtain NPDES permit coverage. These amendments required municipalities to effectively prohibit non-stormwater discharges to their storm drain systems and to implement controls to reduce pollutants in stormwater to the maximum extent practicable.

### **PORTER-COLOGNE WATER QUALITY CONTROL ACT**

In California, the State Water Resources Control Board (State Board) along with the nine Regional Boards has primary responsibility for regulating water quality. The State Board has overall responsibility for water quality regulation under division 7 of the Porter-Cologne Water Quality Control Act (Act). This Act also divides the state into nine hydrological basins, for local administration of the Act by the semiautonomous Regional Boards with coordination and oversight from the State Board. The Regional Boards have authority to regulate point source discharges, such as municipal stormwater discharges, through the adoption of waste discharge requirements under chapter 5.5 of the Act. In addition, the responsibility for implementing the NPDES permit program has been delegated to the State Board and its local Region Boards.

### **RECENT DEVELOPMENTS**

The implementation of the CWA has been very effective in cleaning up our nation's waters. The reduction of pollution has been particularly dramatic for industrial and sanitary treatment plant discharges. For example, the amount of metals being discharged from these sources decreased by about 60 percent between 1986 and 1999 (T. Wu, personal communication, February 2001). However, many of our nation's waters still do not meet the goals set forth in the CWA. Two approaches to address this problem are being implemented, namely, the total maximum daily load (TMDL) program,

and the watershed management approach.

### **TMDL Program**

A TMDL is an estimate of the maximum quantity of a pollutant that could be discharged to a body of water while still ensuring the attainment of water quality standards. The TMDL program was established by Section 303 of the CWA. Congress correctly presumed that even after the implementation of technology based controls, some water bodies would not meet water quality standards. For each water body that does not meet applicable standards (referred to as "impaired"), a TMDL must be established. After the TMDL is established, additional requirements are placed on sources of the pollutant so that the total quantity of the pollutant discharged to the water body from all sources is no greater than the established TMDL.

In response to lawsuits, the U.S. Environmental Protection Agency (U. S. EPA) has recently initiated an intensive effort to develop TMDLs for all impaired waters. In the San Francisco Bay region, TMDLs are scheduled to be developed for mercury, PCBs, chlorinated pesticides, diazinon, sediment, and several other pollutants.

### **Watershed Management Approach**

A watershed is the area of land that drains to a specific body of water. USEPA defines the watershed management approach as having the following components: problem identification, stakeholder involvement, and integrated actions. The watershed management approach is similar to the TMDL approach in that both address



water quality problems in a comprehensive manner. The difference between the two is that the TMDL approach is primarily a command and control approach, whereas the watershed management approach focuses on developing cooperative solutions. Under the watershed management approach, people that live and work in a watershed (stakeholders) develop a consensus regarding the best solutions to watershed problems. The watershed management approach can also encompass issues such as flood control, habitat restoration, and water supply, which are not specifically regulated by the CWA. This Plan describes the Program's involvement in both the TMDL program and the watershed management approach.

### **SUSMPs**

SUSMPs (Standard Urban Stormwater Mitigation Plans) represent a new initiative by the State Board and Regional Boards to control the detrimental effects on water quality caused by new development and redevelopment. The Los Angeles Regional Water Quality Control Board initiated the use of SUSMPs, and under appeal to the State Board, its use was upheld in October 2000 as the statewide standard for what constitutes maximum extent practicable stormwater controls. In the Bay area SUSMPs will need to be tailored to fit local hydrologic and development conditions.

The Alameda Countywide Clean Water Program has long implemented the portion of the SUSMPs requiring the use of BMPs. One of the new parts is the requirement specifying that about 85 percent of the volume of runoff typical of an average wet season must be

treated. Another new part will be the requirement to minimize the rate of runoff that flows from a project site in order to prevent increased erosion of creek channels.

It is expected that SUSMPs will be increasingly used to impose requirements on new development and redevelopment that will be more specific and numeric.



## SECTION 2

## PROGRAM DESCRIPTION

### **MISSION, VISION, AND STRATEGIC OBJECTIVES**

#### **Mission**

*The mission of the Alameda Countywide Clean Water Program is to help local residents, businesses and municipalities meet the stormwater quality goals of the Clean Water Act.*

#### **Vision**

*We, the member agencies, see the Alameda Countywide Clean Water Program as an innovative, nationally recognized leader in efficient and effective stormwater management, protecting and preserving our natural water resources and the San Francisco Bay.*

**Strategic Objectives:** To accomplish its mission and vision, the Program has developed the following strategic objectives:

- Continue our self-directed, proactive approach fostering trust and respect from regulators and business and environmental groups;
- Produce tangible water quality improvements through expanded collaborations with other organizations;
- Communicate a clear vision of the Program's goals and objectives to the public, and to member agencies' staff, management, and elected officials; and,
- Improve communication links and working relationships among departments within member agencies

and between the Program and Regional Board staff.

### **PROGRAM STRUCTURE**

The following agencies are members of the Program: the cities of Alameda, Albany, Berkeley, Dublin, Emeryville, Fremont, Hayward, Livermore, Newark, Oakland, Piedmont, Pleasanton, San Leandro, and Union City; the County of Alameda; the Alameda County Flood Control and Water Conservation District (District); and Zone 7 of the District. The Program was established in 1991 through a Memorandum of Agreement (MOA). The MOA established a General Program and individual programs. The General Program carries out activities in common on behalf of the member agencies. The individual programs are implemented by each member agency. A copy of the MOA is included in Appendix A.

As part of its individual program, each of the member agencies is responsible for complying with the NPDES permit requirements for discharges from its municipally owned storm drain system. The NPDES permit finds that enforcement actions will, wherever possible, be pursued only against the individual agency responsible for the violation. As an area wide activity, the General Program will inform any of the member agencies about potential significant permit compliance problems that it becomes aware of and will offer suggested solutions.

There are eight components to the Program: Planning and Regulatory

Compliance, Watershed Assessment, Monitoring and Special Studies, Public Information and Participation, Municipal Maintenance Activities, New Development and Construction Controls, Illicit Discharge Controls, and Industrial/Commercial Discharge Controls. Component objectives and tasks are described in Section 4. Individual Program activities are described in the Performance Standards (Section 5). Each component is coordinated through a subcommittee that is composed of representatives of the member agencies. All subcommittees report to the Management Committee which is the official decision making body for the Program.

General Program activities are funded by the member agencies through contributions proportional to their area and population. The General Program budget for fiscal year 2001-2002 is \$2.1 million. A copy of the General Program component tasks and budgets for fiscal year 2001-2002 is included in Appendix B.

### **PROGRAM ACHIEVEMENTS**

The Program has enjoyed significant achievements, such as, increasing public awareness, developing a model inspection program, initiating a watershed approach, and identifying diazinon as a significant stormwater toxicant. A few of the Program's achievements are described below; other achievements are described in the component work plans.

#### **Public Awareness**

A major focus of the Program's effort has been to raise the public's awareness of stormwater pollution and the public's role in preventing it. To accomplish that goal the Program initiated numerous activities; including, (1) participated in the Bay Area Stormwater Management Agencies Association's regional television advertising campaign "When Ants Invade," which promoted the use of less toxic pest control practices and won a national advertising industry award; (2) sponsored the development of innovative outreach programs such as *Bay Savers* and *Kids in Creeks*, which encourage watershed awareness and pollution prevention among elementary school students; (3) distributed over 100,000 educational brochures, fact sheets and promotional items; (4) stenciled over 10,000 drop inlets with the "No Dumping Drains to Bay" message; (5) provided over fifty community stewardship grants to local teachers and student groups, environmental groups, service clubs, homeowner associations, and other clean water partners; and (6) implemented two major point of purchase campaigns to educate consumers about less toxic alternatives to pesticides. These efforts have been very successful: in a recent survey of Alameda County residents, 45% of respondents mentioned stormwater runoff as a major cause of water pollution and 74%, believed that their behavior could affect water quality.<sup>1</sup>

#### **Model Industrial/Commercial Stormwater Inspection Program**

In 1993 the Program's municipalities started to conduct stormwater inspections combined with educational outreach to businesses. Since then, more than 10,000 inspections have been

conducted. Based on an evaluation of approximately 1,200 businesses inspected two or more times, the accomplishments of this inspection and educational effort include the following: 1) The number of non-stormwater discharges decreased by about one-fourth; 2) a decline of almost one-half occurred in the number of businesses judged to have a high potential to discharge pollutants to stormwater; and 3) an increase was observed in the use of Best Management Practices. In some ways the program has served as a model as judged by the use of Program's municipal inspection staff in 2000 to help train staff from the Regional Boards; the Program's receipt of a state grant in 1996 to develop a statewide inspection handbook; and the use of several of the inspection program's ideas by other municipal stormwater programs in the Bay area.

### **Watershed Approach**

During the past five years the Program has worked closely with its member agencies and local organizations to begin building successful collaborations in local watersheds. The Program has funded the development of watershed maps, which have been very useful to community groups, and has developed a countywide geographic information system (GIS) that includes data on topography, soil type, impervious surfaces, creeks, storm drains, sanitary sewer lines, water quality, fisheries, and habitat quality. In addition, the Program's member agencies have provided funding to support the development of creek groups and have been participating in numerous ongoing watershed efforts, including, Sausal Creek, Alameda Creek, Laguna Creek, San Leandro Creek, San Lorenzo Creek,

and Lake Merritt. This has resulted in improved stewardship for these creeks and thousands of volunteer hours dedicated to advocacy, clean up, educational outreach, restoration and other improvements to water quality.

### **Diazinon**

When the Program conducted its stormwater pollutant characterization effort (1990 through 1992), it was not anticipated that current generation pesticides would cause impairment of local creeks. However, through the use of toxicity tests and toxicity identification evaluations, the Program found that diazinon, a widely used insecticide, was a significant cause of stormwater toxicity.<sup>2</sup> That finding led to the eventual listing of local creeks as being impaired due to diazinon. After determining that diazinon was a prevalent toxicant, the Program conducted several studies to determine the sources of diazinon in stormwater. One of these studies found that the application of diazinon in accordance with label directions may be responsible for much of the diazinon found in stormwater.<sup>3</sup> The results of that study were cited in U. S. EPA's recent assessment of diazinon that resulted in a national ban on the sale of diazinon for urban use after 2004.<sup>4</sup>

### ***EVOLUTION OF THE PROGRAM***

A great deal has been accomplished over the past ten years. However, as the Program moves into its third permit, it faces significant challenges. In particular, the listings of the bay and creeks as impaired by specific pollutants will require increased efforts to reduce the discharges of these pollutants in

stormwater prior to and as part of TMDLs. The increased focus on other stormwater impacts to local creeks will also require additional effort.

### **Response to Impairment**

The Regional Board conducts periodic reviews of data on water bodies in the region to determine if any pollutant is causing an impairment. As a result of the Regional Board's 1998 review of existing data, the State Board and U. S. EPA listed San Francisco Bay as impaired due to several pollutants, including, mercury, polychlorinated biphenyls (PCBs), diazinon, chlorinated insecticides, and copper. Several creeks in Alameda County are also listed as impaired due to diazinon.

There are often multiple sources of these pollutants, for example, sources may include industrial and sanitary discharges, air emissions and deposition, historic deposits, or stormwater discharges. To address the contribution of these pollutants coming from Alameda County's stormwater discharge, the Program has developed Pollutant Reduction Plans (see Section 4). These Pollutant Reduction Plans provide a description of the problem the pollutants are causing, the known or suspected sources of the pollutant, and the Program's approach to minimizing its discharge of the pollutant. Also included is a list of tasks the Program will complete during the next two years (i.e., FY 2001/02 and 2002/03). These work plans are based on our current understanding of the sources and the appropriate next steps. Beginning in 2002, proposed tasks for future years will be submitted to the Board along with the Program's Annual Report.

### **Local Watershed Efforts**

The previous stormwater management plan recognized that the Program should investigate the watershed management approach as an alternative method for solving local environmental problems. In contrast to the traditional command and control regulatory approach, the watershed approach is characterized by collaborative planning among the various stakeholders in a watershed. The solutions derived from this approach typically take longer to develop, but are more tailored to the unique problems and characteristics of individual watersheds. During the past five years the Program has worked closely with its member agencies and other local organizations to begin building successful collaborations in local watersheds. As expected, each watershed has a unique combination of environmental problems, existing organizations, and restoration opportunities, requiring a patient and flexible approach to developing solutions.

This Plan commits the Program to continuing and expanding the use of the watershed management approach. In addition to the extensive effort that will be conducted under the Watershed Assessment component, the Program will conduct the following activities: (1) provide support to watershed stewardship efforts (Public Information and Participation: Task 3); (2) incorporate results of watershed resource inventories into General Plan amendments (New Development: Performance Standard VII); and, (3) provide Program-wide coordination of watershed activities (Planning and Regulatory Compliance: Task 4). The Program and its member agencies will

also continue to work with key stakeholders in local watersheds to determine how the management of stormwater quality can contribute to local creek protection and improvement efforts. To guide the implementation of the watershed approach, the Program will develop a watershed framework. The framework will lay out specific goals and a process for the Program's and its member agencies' participation in watershed management efforts.

### **Increased Planning and Evaluation**

Work plans and performance standards are divided into components. As in the past, the implementation of each component will be guided by a subcommittee. This structure has been very effective at allowing the Program to focus on specific areas of activity. However, there remains a need for greater planning and coordination across components. The Program has taken a number of steps to address this need. First, to provide a Program-wide focus to our efforts, the Program has developed mission and vision statements as well as strategic objectives. Second, the Plan includes a task to establish and maintain a work group to provide Program-wide planning and coordination (Planning and Regulatory Compliance: Task 6). The work group will meet on a regular basis and be attended by representatives of the various subcommittees. The development and implementation of Pollutant Reduction Plans will also promote coordination across components.

Another ongoing challenge for the Program, as well as for other stormwater management programs, is evaluating the effectiveness of its stormwater

management practices. Due to the tremendous variability in stormwater flow and the ubiquitous nature of stormwater pollutants, it is extremely difficult to detect reductions in pollutant concentrations. Therefore, alternative evaluation methods need to be developed and employed. To address this, the Program has begun to develop methods of assessment for each major task in the component work plans. The Program will continue to develop and implement these methods of assessment over the course of the permit. The Program will also conduct periodic Program-wide evaluations of effectiveness (Planning and Regulatory Compliance: Task 6).

### **Notes**

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<sup>1</sup> *Results of the 1999 Public Attitude and Awareness Survey Regarding Storm Water Pollution*. 1999, Jenkinson Associates: Sacramento, CA.

<sup>2</sup> Hansen, S.R., *Identity and Control of Toxicity in Storm Water Discharges to Urban Creeks*. 1995, S.R. Hansen and Associates: Concord, CA.

<sup>3</sup> Scanlin, J. and Feng, A., *Characterization of the Presence and Sources of Diazinon in the Castro Valley Creek Watershed*. 1997, Alameda Countywide Clean Water Program: Hayward, CA.

<sup>4</sup> USEPA Memorandum, *Water Resources Assessment for Diazinon*. May 10, 1999, Office of Prevention, Pesticides and Toxic Substances, U.S. Environmental Protection Agency: Washington, D.C.





## **SECTION 3      COMPONENT OBJECTIVE AND TASKS**

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### **PLANNING AND REGULATORY COMPLIANCE**

#### **Introduction**

This component encompasses the major planning, regulatory compliance, watershed management, and administrative activities of the Program. The Policy Level Subcommittee oversees this component's activities.

#### **Component Objectives**

1. Promote the implementation of effective and reasonable stormwater regulations by participating in regulatory processes. This may include advocating legislation that benefits member agencies.
2. Promote permit compliance by assisting member agencies with reporting and related activities.
3. Improve Program effectiveness by partnering with outside organizations.
4. Protect and improve the physical, chemical and biological integrity of waters in Alameda County through the development of watershed partnerships and the coordination of watershed management efforts.
5. Develop and implement measures to effectively reduce pollutants causing or threatening to cause impairment.
6. Promote Program coordination through Program-wide planning and evaluation.
7. Provide essential management and legal services.

#### **Major Tasks**

##### **1. Participate in the Regulatory Process:**

- Review and comment on draft legislation and proposed regulations affecting stormwater
- Confer with the Regional Board and other stakeholders during reissuance or amendment of permit
- Participate in TMDL development and implementation process
- Coordinate with other storm water programs through the Bay Area Stormwater Management Agencies Association and the California Stormwater Quality Task Force

**Task Evaluation:** The evaluation of this task may include: 1) a review of the Program's participation in the regulatory process; and 2) an evaluation of the effectiveness of that participation.

##### **2. Assist Members with Permit**

**Compliance:** A fundamental objective of the Program is to ensure that the member agencies comply with the requirements of their permit. The objective of this task is to assist member agencies with the reporting requirements and ensure that reports are submitted on schedule.

- Develop deliverable report forms
- Compile and submit completed deliverable reports to the Regional Board by required dates
- Review member agencies' performance
- Provide additional assistance with permit compliance as requested by member agencies, such as by providing orientation to new staff

**Task Evaluation:** The evaluation of this task may include: 1) a review of the completeness, and timeliness of report submittals; 2) a review of what the Regional Board staff needs included in the reporting; and 3) an assessment of any impediments to reporting as part reviewing the effectiveness of reporting formats and processes.

- 3. Develop Partnerships:** Many public and private organizations have objectives that overlap with the Program's objectives, examples include, Alameda County Household Hazardous Waste Program, Green Business Program, and the Alameda County Waste Management Authority. By working together with these groups and others, the Program will be able to improve its cost-effectiveness. The Program has already begun to build working relationships with these groups and others. The purpose of this task is to expand upon those partnerships and to pursue opportunities to create additional partnerships.

- Identify and prioritize issues where partnerships could significantly improve effectiveness

- Seek to develop or enhance partnerships with public and private organizations that have similar interests

**Task Evaluation:** The evaluation of this task may include: 1) enumeration of new or expanded partnerships, or 2) assessment of the benefits of those partnerships.

#### **4. Facilitate Watershed Approach:**

The Program is engaged in promoting a watershed approach through activities within several components: the Watershed Assessment component provides technical assistance such as habitat assessments and watershed mapping; the Public Information and Participation component sponsors projects that increase watershed awareness; and, the New Development and Construction Site Controls component's performance standards incorporate results of watershed resource inventories into General Plan amendments. In addition, throughout the county member agencies are participating in numerous watershed efforts. The purpose of this task is to coordinate and assist with these activities.

- Assess roles for and develop relationships with potential watershed partners: Regional organization such as the East Bay Municipal Utility District, Alameda County Water District, East Bay Regional Park District, and the Urban Creeks Council are potential partners in several county watersheds.
- Establish a work group to promote information exchange

and coordination among watershed efforts

- Update Watershed Framework Document and implement as appropriate

**Task Evaluation:** The evaluation of this task may include: 1) the number of new or expanded partnerships, and 2) a survey of agency staff regarding the usefulness of the coordination effort.

## **5. Support Pollutant Reduction**

**Plans:** The Program has developed measures to address specific pollutants that are believed to be causing impairment to local water bodies. Planning activities related to the implementation and evaluation of those Plans will be conducted under this task.

- Implement aspects of the Pollutant Reduction Plans that fall within this component
- Coordinate implementing and updating the Pollutant Reduction Plans

**Task Evaluation:** Evaluation may include: 1) assessment of the level of implementation; and 2) qualitative assessment of effectiveness.

## **6. Plan and Evaluate:** Planning and evaluation are essential if the Program is to be effective. This task provides for establishing a work

group to coordinate planning and evaluation across all components.

- Evaluate Program performance and coordinate development of Program-wide annual work plans
- Develop and maintain newsletter and website

**Task Evaluation:** The evaluation for this task may include an assessment of the Program's planning and evaluation process.

## **7. Provide Management Services:**

The objective of this task is to provide essential administrative services to the member agencies.

- Provide Program management, contracting, accounting, and other administrative services, and produce reports on Program activities, expenditures, and performance
- Facilitate the Policy and Management Committee meetings

**Task Evaluation:** The evaluation for this task may include a review of the reporting processes and assessment of areas for possible improvement.

# WATERSHED ASSESSMENT

## Introduction

The Program's objectives for monitoring and assessment have evolved during its first ten years. Early monitoring emphasized testing stormwater, dry weather discharges and sediment to assess pollutant loads and stormwater impacts on San Francisco Bay.

However, in August 1996 the Regional Board staff requested that the Program and other municipal stormwater programs in the region redirect their monitoring resources from fixed-station, wet-weather monitoring, to increased watershed assessment and long-term monitoring plans for creeks and other waterbodies.

In November 1999 the Regional Board staff released the Regional Monitoring and Assessment Strategy (RMAS) that describes a regional framework and schedule for assessment of pilot watersheds by various agencies. A letter sent to stormwater agencies in February 2000 affirmed that their participation in the RMAS would meet the intent of NPDES permit's requirements for assessing watersheds and estimating pollutant loading. The letter supported a functional approach to watershed assessment, which would vary according to the conditions and beneficial uses found in each watershed. The Program has incorporated this approach into its Watershed Assessment component.

These assessments will vary depending on the condition of the watershed. Functional assessment of relatively undeveloped watersheds may focus on habitat and flow conditions needed to sustain fishery resources and other creek-dependent life.

In contrast, urbanized creeks are usually highly altered by land use changes in their watersheds, and assessment of such systems might focus on their ability to support existing uses, such as non-contact recreation and industrial water supply. In a report funded by the Program, Gunther et al. (2000) identified potential indicators or benchmarks for evaluating the condition of a creek's beneficial uses. These include measurements of individual pollutants, characterization of the amount and timing of creek flow, and surveys of diversity and composition of plant and animal communities living in creeks and adjacent riparian areas.

The Program's 1996-2001 Plan included activities aimed at exploring waterbody-specific approaches for improving water quality and increasing awareness and stewardship by local residents. Experiences from these pilot watershed activities have led to development of the Alameda County Watershed Framework. The Watershed Framework is a working document that describes potential roles for the Program, member agencies, and others in local watershed efforts.

The Watershed Assessment component includes activities to coordinate, manage and present watershed-specific information and spatial data.

Component tasks also include refining a suite of indicators of creek health and tailoring the content and presentation of data to make it more useful to managers and other stakeholders of local watershed-based initiatives. Activities under the

Monitoring and Special Studies component continue to include monitoring pollutant trends, evaluating the effectiveness of BMPs, and conducting special studies that have regional scope or are applicable to multiple watersheds. Coordination and facilitation of watershed-based activities are incorporated into the Planning and Regulatory Compliance component.

### **Component Objectives**

1. Develop and maintain a GIS resource for watershed information
2. Use a variety of indicators to assess the functional condition of creeks and watersheds.
3. Provide useful watershed information to the Program and other watershed stakeholders
4. Evaluate component effectiveness

### **Major Tasks**

#### **1. Develop and Maintain GIS for Watershed Information:**

A Geographical Information System (GIS) is the most effective way to manage and analyze complex and diverse types of watershed data. The Program initiated a GIS-based inventory of ten pilot watersheds in FY 2000/01, building on an existing system developed for the San Lorenzo Creek watershed by the District. The objective of this task is to build a coordinated resource for watershed information that can be used by the Program, its member agencies and other watershed partners.

- Expand available countywide coverages through conversion and data sharing with other agencies
- Develop task list and schedule for adding GIS data and tools based on

priorities of Program and local watershed efforts

- Maintain and update coverages, metadata standards and data-sharing agreements
- Coordinate with Program members, Monitoring and other Program components to incorporate additional data types
- Coordinate with the Monitoring and Special Studies component to integrate stormwater and sediment monitoring databases and establish protocols for linking rainfall and flow data

**Task Evaluation:** The evaluation of this task may include 1) review of completeness and quality of GIS coverages; and 2) evaluation of levels of participation in data-sharing by members and other agencies

#### **2. Characterize Functional Attributes of Creeks and Potential for Stormwater**

**Impacts:** Beneficial uses, such as fisheries and wildlife, depend on natural ecosystem functions of creeks which link physical and chemical processes with biological populations of animals and plants, both in the creek channel and in the watershed as a whole. Because these systems are complex, watershed managers seek quantifiable indicators that may be applied over a range of conditions to help screen and characterize problems. Regional and national proposals for various indicators must be evaluated, calibrated and

refined for use in Alameda County creeks.

- Establish expected values for selected biological indicators (e.g., macroinvertebrates and fish) in relatively natural channels
- Explore ranges of application of additional measures of creek function, e.g., habitat, riparian buffers, and alterations to flow regime
- Promote consistent, effective indicator application among the Program, its members and other partners including volunteer monitors.
- Coordinate with regional initiatives and assessment strategies

**Task Evaluation:** The evaluation of this task may include 1) review of where various indicators have been applied; and 2) evaluation of indicators' consistency and usefulness in guiding management in pilot watersheds.

### 3. Provide Useful Information To Assist Watershed Management Efforts:

As the General Program and its member agencies increase their participation in local stakeholder meetings and watershed management groups, specialized assessment needs will arise. Effective information presentation and data reporting may require tailoring to a variety of audiences ranging from agency workers to regulators and community groups. Products might include guidance on GIS mapping approaches, supporting materials for grant applications, and "report cards" or descriptions of constraints and

opportunities for watershed management.

- Continue inventory and assessment of the pilot group of creek segments or lakes, and establish a plan for assessing other creeks or lakes within the County
- Work with member agencies and other watershed stakeholders in mapping and identifying data needs for individual watersheds
- Explore ways to inventory existing patterns of BMP application and other localized spatial data
- Develop models for data presentation for different types of representative watersheds
- Present watershed and other spatial data on the Program website and provide user-friendly guidance for its use
- Coordinate data definitions and data management structures through regular meetings with the Regional Board staff, BASMAA Monitoring Committee, and other partners
- Compile assessment data requested by Regional Board staff for water quality assessment reports (Clean Water Act section 305(b))

**Task Evaluation:** The evaluation of this task may include 1) evaluation of overall assessment effort; and 2) review of form, content and distribution methods for assessment information products, with comments and feedback from partners and other data users.

**4. Management and Evaluation of Component Effectiveness:**

The Program will prepare reports, budgets and other items to assist with management and implementation of this component. The effectiveness of implementation will be evaluated as part of the annual report. Annual activities and work plans will be guided by (a) priorities and objectives developed under task 1; and (b) annual review of Watershed Management-related tasks conducted under the Planning and Regulatory Compliance component. Implementation of this component will initially focus on establishing a GIS resource (Task 1), and emphasis will gradually shift to providing other useful data to stakeholders.

**Task Evaluation:** The evaluation of this task may include 1) review of progress towards goals in the long-term strategy; and 2) comments and feedback from Program's Management Committee.

## **MONITORING AND SPECIAL STUDIES**

### **Introduction**

Since its inception, the Program has tried to improve its understanding of stormwater pollution and to develop effective ways to control pollutants through monitoring and related activities. It has participated in the Regional Monitoring Program for Trace Substances (RMP), which monitors water and sediment in the Bay, and it has also conducted testing of stormwater and sediment at an array of fixed storm drain and creek stations throughout the urbanized portion of the county. This monitoring helped to identify a number of pollutants of concern that could be impairing the bay and urban creeks. Current knowledge about these pollutants, and the evolving strategies for addressing them, are described in Section 4 (Pollutants of Concern) and the Pollutant Reduction Plans in Appendix C.

In 1996, the Regional Board staff directed the Program to cease fixed-station wet-weather monitoring and redirect resources to watershed assessment and development of the long-term monitoring strategy for creeks. A draft plan for Long Term Monitoring and Assessment (Gunther et al., 2000) identified the need to link Program monitoring objectives more closely to beneficial uses of waters. Because of the wide range of watershed factors that can affect a waterbody's ability to support beneficial uses, a separate Watershed Assessment component has been developed to collect and manage complex spatial data. Monitoring and Special Studies component tasks will focus on the occurrence, long-term trends and control strategies for pollutants of concern, including the development of a

long-term monitoring work plan for representative urban creeks.

The Program has conducted a variety of special studies to refine information needed to implement the requirements of previous Plans. Examples include studies of the effectiveness of specific BMPs, the use of Toxicity Identification Evaluations to identify diazinon as a probable source of toxicity in urban creeks, and studies to better identify the sources of diazinon and other pollutants.

The Program will continue to identify information gaps and conduct special studies on stormwater pollution to fill these gaps. These studies can be grouped into two categories: 1) studies focused on the pollutants of concern and other widespread pollutant problems; and 2) studies of pollutants responsible for more localized problems, such as litter and construction-related discharges. The implementation of BMPs to address pollutants that are local problems may need to be tailored to physical, social or jurisdictional conditions in specific watersheds. The evaluation of the effectiveness of these BMPs may need to consider conditions as well.

### **Component Objectives**

1. Improve characterization and tracking of pollutants of concern that are found in stormwater
2. Evaluate the effectiveness of stormwater BMPs
3. Provide technical information to member agencies about pollutants



- that may cause localized stormwater problems
4. Coordinate planning and reporting with related monitoring efforts
  5. Evaluate component effectiveness and develop ways to measure the Program's effectiveness over time, including information on cost effectiveness

## **Major Tasks**

1. **Characterize Concentrations and Long-Term Trends for Pollutants of Concern:** Section 4 (Pollutants of Concern) describes several pollutants that the Regional Board or U.S. EPA have identified as causing impairment of the bay or local creeks. Because the Regional Board needs to develop TMDLs for these pollutants it will require the Program's assistance in developing information about pollutant loading and changes in pollutant concentrations that result from the implementation of Pollutant Reduction Plans (Appendix C) and TMDLs. Past monitoring experience indicates that stormwater testing is useful for characterizing some constituents, and it will be continued at a long-term site on Castro Valley Creek. The Program will also sample sediment from creek beds, which is useful for surveying the occurrence of pollutants that are associated with fine particles.

Activities for this task are described in the Annual Monitoring Work Plans submitted to the Regional Board. In addition to participating in coordinated regional data collection, the Program will develop a strategy for creek monitoring that incorporates the following objectives:

- Review existing stormwater and sediment data to select effective sampling methodologies
- Evaluate long-term trends in pollutant concentrations and toxicity in urban runoff
- Establish expected baseline concentrations of mercury, PCBs and targeted organochlorine pesticides in sediment of creeks and storm drains and estimate loadings using available total suspended solids and discharge data.

The Program has a database with the results of the fixed-station stormwater and sediment monitoring results collected during 1988-1995. This database will be updated with pollutant data from relevant special studies conducted by the Program and other local entities. Additional database modules for yearly rainfall patterns and flow history for one or more benchmark sites will be added to assist with assessment of long-term trends in water quality. Objectives for improving data interpretation include:

- Incorporate grab sampling, rainfall and other types of data into the existing database
- Facilitate linkages among pollutant concentrations, rainfall and spatial GIS data

**Task Evaluation:** The evaluation of this task may include review of the Program's effectiveness in identifying long-term pollutant trends.

**2. Characterize Sources and Evaluate BMP Effectiveness for Pollutants of Concern:** Sources of pollutants must be understood in order to develop effective pollutant reduction measures. The impairments caused by the Pollutants of Concern are generally widespread because of the ubiquitous nature of the pollutants and the transport of many of these pollutants through the atmosphere. Because of the regional nature of these pollutants, the Program will need to coordinate closely with the Regional Board staff and with other BASMAA agencies. This task may involve a range of activities, including:

- Special studies of specific watersheds with high pollutant concentrations
- Special studies of sources or pathways
- Modeling pollutant transport in runoff
- Participation in coordinated regional studies such as the North Bay Copper Study
- Participation in national pollutant prevention initiatives such as the Brake Pad Partnership

Program members have implemented a variety of BMPs, but information about their effectiveness is not always readily available. While the new permit may incorporate additional provisions for treating runoff from new development, past studies by the Program and other stormwater agencies have shown that the effectiveness of treatment devices varies according to site-specific conditions. Evaluation of overall BMP effectiveness may necessitate evaluations of:

- Structural treatment controls
- Pollutant control tasks listed in the Pollutant Reduction Plans, such as fluorescent bulb recycling for mercury source control

**Task Evaluation:** The evaluation of this task may include 1) tracking changes in the level of understanding of pollutant sources and controls; and 2) identifying ways to improve the effectiveness and application of BMPs.

**3. Assist Local Watershed Managers in Identifying Localized Stormwater Impacts and Provide Tools for Addressing These Impacts:** In contrast to the pollutants described in Section 4, some pollutants mainly affect waters nearby the source of the pollutant's release. Some beneficial uses, such as contact and non-contact recreation, are very location specific. Assessing stormwater impacts on these beneficial uses may involve a variety of site-specific factors, and the member agencies play a large role in choosing which specific factors and management objectives they would like better understood through studies. High-priority objectives identified by the Watershed Assessment and Monitoring Subcommittee include:

- Evaluate toxicity or other impacts on bay fisheries
- Characterize sediment and litter problems
- Evaluate fecal coliforms and other indicators of human

- health risk for light contact recreation areas
- Provide technical assistance to local watershed managers by providing data and guidance information

**Task Evaluation:** The evaluation of this task may include 1) review of successes and limitations of various approaches to managing localized issues under different conditions; 2) assess feedback from the Program's member agencies and other users about the effectiveness of Program-produced data and guidance materials.

**4. Coordinate with and Support BASMAA and Other Regional Monitoring Efforts:**

The Regional Monitoring Program (RMP) is a collaborative effort to monitor the condition and health of San Francisco Bay. The Program, along with other NPDES-permitted dischargers, contributes to this effort annually. In addition, the BASMAA Monitoring Committee has worked with the Regional Board staff to establish the following three priorities for regional coordination of information: watershed assessment; BMP effectiveness; and characterization of pollutant loads and potential sources. The Program's participation in these regional activities increases opportunities for collaboration and coordination with other stormwater agencies.

- Continue participation in the RMP
- Participate in BASMAA Monitoring Committee and other regional monitoring groups

- Explore monitoring partnerships with other agencies and organizations

**Task Evaluation:** The evaluation of this task may include a review of useful information exchanged and partnerships that are initiated or enhanced.

**5. Management and Evaluation of Component Effectiveness:**

The Program will prepare reports, budgets and other items to assist with management and implementation of this component. The effectiveness of implementation will be evaluated as part of the annual report.

- Coordinate annual work plans to reflect the priorities of the Program's Long-Term Monitoring Plan
- Promote cost-effective monitoring by designing data collection to meet multiple monitoring objectives, where possible.
- Facilitate and support the Watershed Assessment and Monitoring Subcommittee meetings

**Task Evaluation:** The evaluation of this task may include 1) a review of work plan development process; and 2) evaluation of accomplishments against Program objectives.

## **PUBLIC INFORMATION AND PARTICIPATION**

### **Introduction**

Most people are unaware that the largest source of pollutants to local creeks, lakes and the bay comes from the stormwater that flows off the cityscape picking up drops of motor oil, brake pad dust, exhaust emissions, pesticides, dirt and litter and, in most cases, receiving no treatment. These sources of pollutants result from the small, incremental and collective activities of everyone in Alameda County. Public information and participation is one of the keys to preventing stormwater pollution. The better that everyone understands the importance of stormwater pollution, their own, often unintentional, contribution to the problem, and simple things that we can do about it, the cleaner our creeks and the bay will become.

This component of the program focuses on providing information to residents in order to enlist their help in preventing stormwater pollution. The Public Information and Participation Subcommittee oversees this component's activities. This subcommittee is also responsible for ensuring the consistency of terminology, format and style among all of the Program's educational outreach efforts.

A summary of the progress being made in public awareness is described in the Program Description Section under Program Achievements.

### **Component Objectives**

1. Educate residents about stormwater pollution problems.
2. Encourage residents to adopt less polluting and more environmentally beneficial behavior.
3. Assist member agencies with watershed awareness efforts and provide stewardship opportunities.
4. Improve public information and participation effectiveness through partnering with other organizations.
5. Evaluate component effectiveness and make improvements.

### **Major Tasks**

#### **1. Implement Targeted Outreach:**

The Clean Water Program has been working with other municipal stormwater agencies through BASMAA to identify categories of pollutants and pollutant generating behavior to target as part of regional advertising and action campaigns. This pooling of resources has helped to generate more effective campaigns than could be achieved by working independently.

It is anticipated that future targeted campaigns will focus on helping to implement the Pollutant Reduction Plans for specific water quality impairing pollutants. The pollutants that appear to be priorities on the Regional Board's list include mercury, PCBs and dioxin compounds, and pesticides (diazinon, chlordane, dieldrin and DDT). Another possibility would be to develop and implement a countywide anti-littering campaign. The campaigns will focus primarily on targeting

residential sources and encouraging residents to prevent pollution.

The Public Information and Participation (PIP) Subcommittee will develop and update a list of priorities for helping to select future campaigns. Criteria for the selection of priorities will include that a significant portion of the pollutant-generating behavior originates from residents. It will be important to continue to evaluate the effectiveness of each campaign and not to focus too much on the same type of pollutant or category of pollutants.

The General Program will also collaborate with groups such as the Bay Area Air Quality Management District, the Alameda County Waste Management Authority, Home Builders Association of Northern California, and other groups to expand the impact of any targeted outreach.

**2. Continue to Reinforce General**

**Outreach Messages:** Existing PIP materials that the PIP Subcommittee determines are useful enough to continue in circulation will be updated, as needed, and reprinted or produced for each agency to distribute and for distribution by the General Program on its website and through other methods. The PIP Subcommittee may choose to have more of the existing materials translated into additional languages, if this has been identified as an effective way to reach groups whose primary language is not English. The continued reinforcement will also occur through increased collaboration with other public agencies and private organizations with common interests.

**3. Provide Educational Support and Watershed Stewardship**

**Support:** This task will include helping to educate students about stormwater pollution prevention and related environmental issues. The General Program has actively supported a number of school focused educational endeavors, including Bay Savers (targeted to fourth graders), Kids in Creeks/Gardens/Watersheds (targeted to teachers) and Estuary Action Challenge. The PIP Subcommittee will decide at least every two years which educational activities to support based on the known or expected effectiveness of the activity and how well it addresses the objectives of the PIP component.

This task will also involve continued support for the Community Stewardship Grant program.

Lastly, this task will include training for member agency staff responsible for PIP. This training may also be expanded to include other targeted groups such as was done with the *East Bay Watershed Management Symposium* in 1998 and *Turning the Tide: Balancing New Development and Clean Waters* symposium in 2001.

**4. Assist Member Agencies Implement and Improve the Performance Standards:**

This task will include assisting the member agencies to implement their PIP performance standards. This assistance may include undertaking any project that will

result in additional tools and means for the member agencies to better implement the performance standards. In the past this has included such things as purchasing kiosk displays and dioramas for the member agencies to use at public events.

This task will also include review and, if needed, improvement in the performance standards at least every two years. This review will occur as part of PIP Subcommittee meetings. The evaluation information collected as part of Task 5 will be used to decide how and where to make improvements.

- 5. Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the PIP Subcommittee and its work groups to conduct its meetings and prepare any needed NPDES permit required reports and work plans. This task will also include assisting with the development of annual General Program component work plans and budgets.

The effectiveness of this component will be evaluated as part of the following types of activities, which are offered as examples:

- Conduct a public awareness survey similar to the one conducted in 2000.
- Evaluate the information being submitted as part of the annual reports.
- Survey member public agencies to obtain information about how well this component and the performance standards are working.
- Evaluate the Regional Board staff's reviews of the Clean Water

Program's performance in this area.

- Review information collected elsewhere of tangible progress. This may include tracking changes in behavior based on pre and post- campaign surveys paid through participation in BASMAA.

The PIP Subcommittee as part of developing its annual work plan and budget will consider improvements to the General Program at least annually.

## **MUNICIPAL MAINTENANCE ACTIVITIES**

### **Introduction**

Municipal maintenance staff comprises one of the largest group's of public employees whose everyday work sweeping and repairing streets, cleaning storm drains, and applying herbicides can directly help to prevent stormwater pollution. In addition, the hundreds of maintenance field personnel play an essential role in reporting on illicit discharges and pollution problems that need to be fixed. The maintenance staff also helped to spread the word about stormwater pollution prevention among its maintenance counterparts in other public agencies.

The Maintenance Subcommittee, which is one of the oldest in the Program, is responsible for helping to implement this component's activities.

### **Component Objectives**

1. Optimize pollutant removal during routine maintenance activities such as street sweeping and maintenance of storm drainage facilities.
2. Prevent or minimize discharges to storm drains and watercourses from road maintenance, parks, corporation yards and other publicly owned facilities.
3. Provide information and education about the Alameda Countywide Clean Water Program to agency employees.
4. Evaluate component effectiveness and make improvements.
5. Facilitate reporting.

### **Achievements**

One of the accomplishments of the Program has been to reach a consensus among the member agencies on how to implement the diverse activities involved in municipal maintenance so as to minimize the stormwater pollution. This resulted in the development of performance standards for street cleaning; storm drainage and watercourse maintenance; litter control; road repair and maintenance; and corporation yard operations.

One of the core maintenance areas has been the use of street sweeping to remove potential pollutants prior to their being flushed into local creeks and the bay. All of the municipalities report their street sweeping and storm drainage cleaning activities on a standardized monthly form. In Fiscal Year 1999/00 the collective street sweeping effort of all of the municipalities resulted in the sweeping of about one quarter of a million curb miles of street with the removal of over 78,000 cubic yards and 1,000 tons of material. These amounts are similar to what has been achieved in most recent years, except during the El Nino year in 1998 when the amount of material removed by sweeping was reduced probably because the persistent rains flushed material away before it could be swept up.

The Program has well attended annual training workshops for municipal maintenance staff. During the last three years this training has been augmented creatively by the sweeper rodeo and similar events to demonstrate Best Management

Practices usage in an engaging manner. In addition, in 2000 the Program hosted an educational outreach workshop that was attended by representatives from public agencies outside of the Program and by PG&E.

### Major Tasks

#### 1. Implement and Assist with

**Performance Standards:** Each agency will implement the municipal maintenance performance standards presented in Section IV. The performance standards include the following major activities:

- Street Sweeping
- Storm Drain Cleaning
- Training
- Reporting

The General Program will work through the Maintenance Subcommittee to resolve implementation and consistency issues.

#### 2. Coordinate Maintenance-Related Activities with Other

**Subcommittees of the ACCWP, Other Agencies and Private**

**Industries:** The subcommittee will work with appropriate staff from other Subcommittees of the ACCWP, park and recreation departments, and other public agencies and private industries whose activities are similar to or potentially affect municipal maintenance activities to identify activities of concern. Examples of other public agencies and private industries include PG&E, water suppliers and utilities, garbage collection companies, the Port of Oakland, golf courses, private recreational facilities and animal confinement areas.

#### 3. Optimize Data Management and

**Analysis:** The General Program will optimize ongoing collection, recording and analysis of maintenance data. This will include continuing to evaluate if the types of maintenance data being collected are useful and if other types of data should be collected. Examples of potential studies and data analysis include the following:

- Leaf collection programs
- Litter abatement programs

#### 4. Outreach and Training:

The General Program will facilitate outreach and training activities aimed at preventing discharges from maintenance activities, with direction from the Maintenance Subcommittee. This includes selecting the appropriate forum (e.g., workshops, round table meetings, work groups, inter/intra-agency coordination meetings, etc.) depending on the target audiences (e.g., ACCWP agencies, other agencies, property owners, residence, etc.). The Maintenance Subcommittee will also coordinate outreach activities with other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the Maintenance Subcommittee overlap with the objectives of another Subcommittee.

The Maintenance Subcommittee will identify a target audience at least once every two years; the Subcommittee will select the appropriate forum for the outreach depending on the selected audience.



The General Program will develop and update materials (such as BMP flyers, brochures, posters, etc.) that are needed to support outreach and training activities, as determined by the Maintenance Subcommittee.

**5. Manage Component and Evaluate and Improve Its Effectiveness:**

The General Program will assist the Maintenance Subcommittee and its work groups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are examples of how the effectiveness of this component may be evaluated:

- Survey member agencies to obtain information about how well this component and the performance standards are working.
- Evaluate the information being submitted as part of the annual reports.
- Evaluate the Regional Board staff's reviews of the Clean Water Program's performance in this area.

# NEW DEVELOPMENT AND CONSTRUCTION CONTROLS

## Introduction

New development offers a unique opportunity to construct projects that prevent stormwater pollution. Historically projects were constructed by building up to or over culverted creeks, constructing drainage ways to convey runoff off of project sites quickly, and ignoring opportunities to prevent or treat stormwater runoff. These developments lead to the destruction of flood plains and alterations in the natural structure and function of creeks, as well as to increases in the amount of stormwater pollution.

Better ways to design and construct new projects have received a considerable amount of attention in recent years. In 1994 the Regional Board staff developed its *Staff Recommendations for New and Redevelopment Controls for Storm Water Programs*.

The concepts in this document were used to develop the performance standards for New Development. In 1998 the Program and other Bay area municipal stormwater programs developed through BASMAA the *Start at the Source* manual. This manual describes a comprehensive approach to planning environmentally sensitive developments that minimize increases in the amount of impervious cover and combine stormwater treatment systems into the landscaping. Additional models will be developed as part of meeting the new Standard Urban Stormwater Mitigation Plan requirements described in the Background Section under Recent Developments.

## Component Objectives

1. Identify and help implement source controls, site design measures and post-construction stormwater pollutant and hydromodification controls.
2. Assist with incorporating controls on impairing pollutants prior to and following completion of load and waste load allocations as part of a Total Maximum Daily Loads process.
3. Ensure that public works construction and maintenance projects conform to the same standards as private projects.
4. During construction promote the use of controls to reduce the discharge of pollutants to the maximum extent practicable and effectively control non-stormwater discharges.
5. Evaluate component effectiveness and make improvements.

## Achievements

The Clean Water Program has emphasized the development of tools to help implement this component of the Stormwater Quality Management Plan. This included developing suggested Conditions of Approval for residential, commercial and industrial developments and compiling a *Catalog of Structural Stormwater Quality Control Measures*. Training focused on Planning Commissioners and individual municipality planning and engineering staffs. Municipalities have begun to implement the *Start at the Source* types of stormwater design measures. This has included the use of

grassy swales at residential, commercial, industrial and public works developments in a number of cities and the District's construction and operation of a stormwater treatment pond draining about 500 acres of residential area in Fremont. With assistance from the Regional Board staff, other areas of emphasis have included improving controls on erosion and sedimentation and preventing the releases of construction related discharges.

## **Major Tasks**

### **1. Identify How To Implement Source, Site Design, Post-Construction Stormwater Treatment and Hydromodification Controls:**

As part of the previous Stormwater Management Plan, the Clean Water Program emphasized the use of pollutant source controls and site planning measures, such as those found in the *Start at the Source* manual. The Regional Water Quality Control Board and municipal planning staff are interested in specifying more clearly how source, design, treatment and hydromodification controls need to be used as part of the maximum extent practicable control of pollutants from stormwater.

This task will include the following activities:

- Review the Santa Clara Valley Urban Runoff Pollution Prevention Program's work on implementing its new permit requirements that address these types of controls. This will also include identifying and reviewing useful approaches of other municipal stormwater programs in California and elsewhere.
- Identify and work with a stakeholder group to develop a

method for appropriately integrating pollutant and hydromodification controls as requirements for new development.

- Submit the Clean Water Program's agreed upon method for implementing pollutant and hydromodification controls to the Regional Board staff and, based on feedback, make any needed changes.
- Identify assistance that the Clean Water Program's member agencies will need in order to implement the new, agreed upon controls.
- Every two years review and, if appropriate, improve the agreed upon controls based upon implementation experience and other new information.

**Task Evaluation:** The evaluation of this task may include 1) determine whether the General Program was able to achieve consensus among the stakeholders regarding the new controls and 2) obtain feedback from the Regional Board staff on how well the agreed upon controls met its expectations.

### **2. Help Implement Source, Site Design, Post Construction Stormwater Treatment and Hydromodification Controls:**

This task will include assisting the member agencies to implement the agreed upon more specific pollutant and hydromodification controls. This may include the following types of activities, which are offered as examples:

- Modify and improve the performance standards to incorporate the agreed upon control methods.
- Develop and update the Conditions of Approval, development guidance and review checklists.
- Track and discuss at New Development Subcommittee meetings municipal case studies of new development/redevelopment projects that are illustrative of successes, problems and questions about the control method.
- Develop guidance on cost-effective ways to implement the controls, such as, updating the “Project Worksheet for Permanent Stormwater Quality Controls.”

**Task Evaluation:** The evaluation of this task may include: 1) assess the information being submitted as part of the annual reports; 2) obtain feedback from the municipalities about how successful the implementation of the controls has been; and 3) survey builders on how helpful the more specific controls and implementation tools have been and ways that they can be improved.

### 3. Assist with the Development of Watershed Information and Facilitate Its Use:

This task will involve identifying the watershed information needs of the member agencies so that this information may be collected for use by agency planning and engineering staff. The actual collection of most watershed information will be conducted as part of the Watershed Assessment component. This task will also include assisting the member agencies with the

use of watershed information that has been collected.

**Task Evaluation:** The evaluation of this task may include a survey of the agencies’ planning and engineering staffs to see how well their watershed information needs were met.

### 4. Promote Outreach and Training:

This task will include reinforcing and expanding educational outreach to agency planning and engineering staff, Planning Commissions, City Councils, builders, and builders’ consultants and contractors. The next wave of this outreach and training will focus on helping everyone to understand and implement the more specific pollutant and hydromodification controls developed as part of Task 1. This outreach and training will include the following:

- Conduct at least one outreach and/or training event annually that is targeted to either agency staff or to the building industry. This may be conducted in collaboration with other agencies, organizations or groups.
- Develop and distribute outreach material that goes beyond the trifolds that have been developed in the past.
- Compile and distribute, in binders, to agency staff copies of all of the guidance and educational material that have been developed by the subcommittee.
- Develop and maintain a mailing list of designers,

builders, developers that may be used by member agencies to do outreach.

**Task Evaluation:** The evaluation of this task may include 1) the number of staff trained from each of the targeted groups; and 2) summaries of the feedback obtained from recipients of training and outreach.

- 5. Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the New Development Subcommittee and its work groups to conduct its meetings and prepare any needed NPDES permit required reports and products. This task will also include assisting with the development of annual General Program work plans and budgets. As part of developing the annual work plan and budgets, the New Development Subcommittee will consider ways to improve the General Program.

**Task Evaluation:** The evaluation of this task may include: 1) review how well the municipalities are meeting the new NPDES permit requirements that affect new development and redevelopment, this may include summarizing the Regional Board staff's reviews of member agency performance in this area; and 2) review information collected elsewhere of tangible progress, such as changes in environmental indicators developed by the Stormwater Environmental Indicators Pilot Demonstration Project in Santa Clara Valley.

## **ILLICIT DISCHARGE CONTROLS**

### **Introduction**

One of the most visible reasons for having a Program is to eliminate pollution caused by materials being poured, spilled, dumped, washed, or discharged into the municipal storm drain system. One of the Clean Water Act's few explicit stormwater dictates is that permits include a "requirement to effectively prohibit non-stormwater discharges into the storm" drain systems. The federal regulations allow the discharge of some minor types of non-stormwater discharges, such as under specified conditions.

The Program has been proactive in identifying and eliminating illicit discharges to the municipal storm drain system. This has included enlisting the help of each agency's municipal maintenance and other field staff who are most likely to see what is being discharged to the storm drain system or dumped where it may become waterborne. A brief summary of the progress being made is described in the Achievements section below.

### **Component Objectives**

1. Control illicit discharges by conducting field surveys of the municipal storm drainage conveyance system and identifying and eliminating the sources of non-stormwater discharges.
2. Effectively coordinate spill response and clean-up with existing programs.
3. Optimize illicit discharge control activities through planning and prioritization.
4. Address discharges that may not be considered illicit if properly managed.
5. Partner with other Subcommittees, agencies, and groups to increase public awareness on how to effectively and efficiently prevent pollutant discharges to the storm drains.

### **Achievements**

The Program has conducted several training workshops for illicit discharge inspectors to improve member agencies' familiarity with Best Management Practices for identifying and eliminating illicit discharges. In 1995 the Program developed a standardized form for documenting illicit discharge findings and controls. This systematic approach has helped to identify the predominant types of illicit discharges so that additional, targeted educational outreach could be undertaken.

Since 1995 the member agencies have identified and eliminated approximately 5,000 illicit discharges. During this period the number of illicit discharges being found each year has about doubled and the number of illicit discharges that led to enforcement has approximately quadrupled. The increase in the number of illicit discharges being found may reflect an improvement by illicit discharge inspectors, maintenance staff, outside agency staff and the general public in identifying and reporting illicit discharges incidents.

## **Major Tasks**

### **1. Implement and Assist with**

**Performance Standards:** Each agency will implement the performance standards specified in Section 5 for illicit discharge control activities. The performance standards include the following major activities.

- Developing a five-year Action Plan for conducting field surveys of the agency's watershed.
- Conducting field surveys.
- Investigating illicit discharge reports and conduct appropriate follow-up.
- Effectively eliminate illicit discharges through education and enforcement.

The Industrial & Illicit Discharge Control (I&IDC) Subcommittee will review the performance standards at least every two years and make any needed improvements. The General Program will work through the I&IDC Subcommittee to resolve implementation and consistency questions.

### **2. Assist Member Agencies Comply with Requirements for**

**Conditionally Exempt Non-Stormwater Discharges:** The General Program will continue to facilitate compliance with non-stormwater discharges identified in the NPDES permit as conditionally exempt from discharge prohibitions to the storm drains. The General Program will work through the I&IDC Subcommittee and its work groups to identify effective control measures. The General Program will also facilitate the process for adding any non-stormwater discharges identified

to the list of conditionally exempt non-stormwater discharges, and developing the appropriate BMPs.

### **3. Track and Analyze Non-stormwater Discharge Reports:**

Each agency submits quarterly summary reports on illicit discharge control activities as described in the performance standards. The General Program will collect and analyze this information for trends and other useful information to better plan and help improve illicit discharge control program activities, with direction from the I&IDC Subcommittee. For example, information on non-stormwater discharges can be used to identify needs for additional information or to develop discharge elimination/disposal priorities for categories of discharges.

### **4. Conduct Outreach and Training:**

The General Program will facilitate outreach and training activities to prevent illicit discharges, with direction from the I&IDC Subcommittee. This includes selecting the appropriate forum (e.g., workshops, round table meetings, work groups, inter/intra-agency coordination meetings, etc.) depending on the target audiences (e.g., ACCWP agencies, other agencies, property owners, residences, etc.). The I&IDC Subcommittee will also coordinate outreach activities with other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the I&IDC Subcommittee overlap with the objectives of another

Subcommittee. For example, the I&IDC Subcommittee will coordinate with the Watershed and Monitoring Subcommittee when conducting outreach activities that address pollutants targeted in Pollutant Reduction Plans.

The I&IDC Subcommittee will better define and identify the target audience at least once every two years; the Subcommittee will select the appropriate forum for the outreach depending on the selected audience. The General Program will develop materials (such as BMP flyers, brochures, posters, etc.) that are needed to support outreach and training activities, as determined by the I&IDC Subcommittee.

- 5. Manage Component and Evaluate and Improve Its Effectiveness:** The General Program will assist the I&IDC Subcommittee and its work groups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are offered as examples of how the effectiveness of this component may be evaluated.
- Evaluate the information being submitted by ACCWP agencies as part of the annual reports.
  - Coordinate with the PIP Subcommittee to survey the general public on illicit discharges and BMPs to prevent the discharge of pollutants.
  - Evaluate the Regional Board staff's reviews of the Program's performance in this area.



## **INDUSTRIAL/COMMERCIAL DISCHARGE CONTROLS**

### **Introduction**

The prevention and control of stormwater pollution from commercial and industrial businesses is one of the major activities of the Program. The Program emphasizes educating businesses about methods to prevent and control stormwater pollution. Educational outreach to businesses has occurred primarily during facility inspections and through working with trade and business organizations on identifying appropriate Best Management Practices.

Educational outreach materials for the automotive repair shops and restaurants, the two most common businesses countywide, has included the development of brochures, posters, and flyers. In addition, there are manufacturers and other more industrial types of businesses that are required to have coverage under the California Industrial Stormwater NPDES General Permit. Since the municipalities are required to control any type of stormwater that discharges to their municipal storm drain system, the municipalities do not treat one type of business differently than another.

The Industrial & Illicit Discharge Control Subcommittee is responsible for overseeing the implementation of this component and the Illicit Discharge Controls component.

### **Component Objectives**

1. Reduce the amount of pollutants in stormwater runoff to the maximum extent practicable from industrial and commercial facilities.
2. Eliminate effectively non-stormwater discharges from industrial and

commercial facilities to the municipal storm drain system.

3. Identify and eliminate potential stormwater pollution sources through facility inspections, outreach activities, and appropriate follow-up including enforcement.
4. Provide incentives, both positive and regulatory, for businesses to comply with stormwater requirements.
5. Evaluate component effectiveness and make improvements.

A summary of the progress being made in preventing and controlling businesses' contribution to stormwater pollution is described in the Program Description Section under Program Achievements.

### **Major Tasks**

1. **Implement and Assist with Performance Standards:** Each agency will implement the performance standards specified in Section 5 for industrial/commercial discharge control activities. The performance standards include the following major activities.
  - Developing a five-year Inspection Plan and an annual Inspection Workplan for conducting business inspections.
  - Conducting business inspections.
  - Conducting outreach and enforcement to businesses to obtain compliance.

The five-year Inspection Plan is a one-time permit requirement. Each agency will

describe its industrial and commercial base, as well as business inspection priorities and procedures. The description will include an estimate of the number of industrial and commercial sites requiring inspection for the five-year permit period and the numbers of facilities under each business type.

The Industrial & Illicit Discharge Control (I&IDC) Subcommittee will review the performance standards at least every two years and make any needed improvements. The General Program will work through the I&IDC Subcommittee to resolve implementation and consistency questions.

- 2. Develop BMP Guidance:** With direction from the I&IDC Subcommittee, the General Program will develop materials to support illicit discharge control and industrial/commercial discharge control activities. This includes identifying target audiences and the format (e.g., brochures, flyers, checklist, poster, etc.) of the guidance material best suited for the target audience.
- 3. Track and Analyze Facility Inspection Reports:** Each municipality submits inspection information on the standard report form as described in the performance standards. The General Program will continue to collect and analyze this information for trends and other useful information to better plan and help improve business

inspection, outreach, and enforcement activities, with direction from the I&IDC Subcommittee. For example, information on the potential to discharge pollutants can be used to identify priority businesses for the following year's inspection or outreach activities.

- 4. Conduct Outreach and Training:** The General Program will facilitate outreach and training activities to prevent pollutant discharges from business activities, with direction from the I&IDC Subcommittee. This includes providing incentives, both education/outreach and enforcement, for businesses to comply. The audience can include both agency and business groups or organizations. The I&IDC Subcommittee will also coordinate outreach activities with other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the I&IDC Subcommittee overlap with the objectives of another Subcommittee.

The I&IDC Subcommittee will identify a target audience at least once every two years; the Subcommittee will select the appropriate forum for the outreach depending on the selected audience.

**5. Manage Component and Evaluate and Improve Its Effectiveness:**

The General Program will assist the I&IDC Subcommittee and its work groups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are offered as examples of how the effectiveness of this component may be evaluated:

- Evaluate the information being submitted by ACCWP agencies as part of the annual reports.
- Survey businesses on how the effectiveness of outreach and inspection activities described in this component and its performance standards.
- Evaluate the Regional Board staff's reviews of the ACCWP's performance in this area.



## SECTION 4

## POLLUTANTS OF CONCERN

As a result of its 1998 assessment of water bodies in the Bay Area, the Regional Board listed San Francisco Bay as impaired due to the following pollutants: diazinon, mercury, polychlorinated biphenyls (PCBs), copper, nickel, chlordane, DDT, dieldrin, and selenium. The U.S. EPA subsequently added dioxin-like compounds as one of the bay's impairing pollutants; listed several creeks in Alameda County as impaired by diazinon; and listed Lake Merritt as impaired due to litter and low dissolved oxygen.

To address the contribution of these pollutants from stormwater, the Program is developing pollutant reduction plans (PRPs). PRPs provide a comprehensive list of actions the Program will take to further reduce the discharge of impairing pollutants that are the highest priority for the Regional Board: diazinon, mercury, copper, and PCBs (see Appendix C). This section of the Plan provides information on each of these pollutants, including, problem definition, sources, challenges, and the Program's approach to reducing the level of these pollutants in stormwater. Other pollutant reduction plans will be developed as needed.

### **DIAZINON**

#### **Problem Definition**

Diazinon is a widely used organophosphate insecticide that has been detected in creeks throughout the Bay Area. During storm events, the concentration of diazinon in local creeks is often high enough to be toxic to some

species of aquatic life. For example, 71% of stormwater samples collected from Bay Area creeks were lethal to a small crustacean, *Ceriodaphnia dubia*, and Toxicity Identification Evaluations (TIEs) have determined that diazinon was the primary cause of this toxicity (Katznelson, 1997). *C. dubia* is a standard U.S. EPA test species, and although it is not a resident species in local creeks, toxicity to *C. dubia* suggests that other aquatic insects that inhabit local creeks could also be adversely affected by the presence of diazinon. Based on the prevalence of stormwater toxicity and the results of the TIEs, the U.S. EPA listed Alameda, San Leandro, and San Lorenzo creeks as impaired by diazinon.

U.S. EPA has banned the sale of diazinon for urban use after 2004 due to concerns regarding potential environmental and human health impacts. However, the application of diazinon will be allowed to continue until the stock of diazinon sold prior to the end of 2004 has been depleted. Therefore, the level of diazinon in stormwater may continue to exceed toxic concentrations for several years after its sale is banned.

Diazinon is not the only insecticide found in Bay Area creeks. Other commonly used insecticides, such as chlorpyrifos, carbaryl, and malathion, also have been detected and may be contributing to toxicity. As diazinon and other insecticides such as chlorpyrifos are banned, other insecticides will be used in their place. The replacement

pesticides may cause equal or increased toxicity in stormwater discharges.

### Sources

The primary source of diazinon in Alameda County creeks is stormwater runoff from urbanized areas. Diazinon is applied by both professional and non-professional applicators. About half of the estimated 30,000 pounds of diazinon used in Alameda County in 1995 was applied by residents who purchased the product at retail outlets. The remainder was applied by commercial pest control applicators. The most common target pests were ants, fleas, and spiders (Scanlin and Cooper, 1997).

Although improper use or disposal may account for some of the diazinon in stormwater, recent studies suggest that a major source is use in accordance with label directions (Scanlin and Feng, 1997). Only a small amount of pesticide causes toxicity in creeks, therefore, even proper use could account for the toxic concentrations observed. For example, Scanlin and Feng (1997) often observed toxic concentrations in a creek where it was estimated that only 0.3% of the diazinon used in a small, urbanized watershed ended up in the creek. This percentage of pesticide entering runoff is what would be expected for runoff from proper use. For example, Balogh and Walker (1992), in a study of agricultural runoff, estimated the maximum runoff rate for most pesticides under normal conditions at between 0.5% and 1% of the total quantity applied, and initial results of a study to assess diazinon runoff from urban sites suggests that pesticide runoff from these sites is of about the same proportion as in agricultural applications (ACCWP).

### Challenges

There are major regulatory, economic, social and technical obstacles to significantly reducing the level of insecticides in stormwater runoff. Following is a brief description of some of these obstacles.

**Regulatory Obstacles:** Nationally, insecticides are regulated under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). The criterion for acceptability under FIFRA is that “the insecticide *does not cause unreasonable adverse effects* to people or the environment when it is used according to the product label directions and restrictions” [emphasis added]. Under FIFRA, the economic benefit is weighed against the environmental impact when determining what is “unreasonable”. Under the Clean Water Act, however, the water quality standard is much more restrictive and is stated as “no toxics in toxic amounts”. The effect of this discrepancy is that one office of U.S. EPA may allow the use of an insecticide, while another office may require the development of a TMDL to address a water quality impairment due to its use.

In California, the use of insecticides is also regulated by the California Department of Pesticide Regulation (CDPR), and with the exception of some very limited authority granted to the county agricultural commissioner, local government is prohibited from regulating insecticide use (section 11501.1 of the California Code of Regulations).

**Economic Obstacles:** Pest control is a big business. Based on the estimated 15,000 pounds of diazinon (active

ingredient) sold annually, retail sales in Alameda County are in the neighborhood of \$250,000 annually for diazinon alone. In addition to retail sales, there are approximately 50,000 licensed applications of diazinon for structural and landscape pest control in Alameda County every year (Scanlin and Cooper, 1997). Assuming an average per-application cost of \$50, this use would generate over \$2 million annually. Considering the financial resources available to the pesticide industry, it would be difficult for the Program to compete effectively through the use of public outreach/advertising.

**Social Obstacles:** Some people do not like bugs, and view one spider or ant around their house as one too many. This strongly ingrained perception is difficult to alter. Many people will still choose to use insecticides even if they are aware of the harm it causes aquatic ecosystems.

**Technical Obstacles:** Preventing the improper use or disposal of diazinon will not solve the problem. Previous and ongoing studies (Scanlin and Feng, 1997; and ACCWP) indicate that a significant portion of diazinon applied according to label directions moves off-site and eventually ends up in creeks. Many other insecticides migrate in a similar fashion. An effective solution must involve the development of an insecticide formulation that does not migrate from the site of application or one that is toxic only to the target pest.

Direct treatment of runoff to reduce diazinon or other insecticides is impractical for two main reasons. It is difficult to treat a large volume of water in a short period of time as occurs during

storm events. Furthermore, diazinon in its dissolved form causes toxicity and it is not readily removed by the usual filtration or settling technologies.

## **Program's Approach**

**Lead by Example:** Although municipal use accounts for a small fraction of the insecticides used in the county, the member agencies believe they should set an example by ensuring that they minimize risk to the environment and human health. Their first step is to conduct a review of annual insecticide use to determine the quantity used and the targeted insects. The next step is to evaluate the audit results to determine if additional actions could be taken to minimize risk. The results of the audit and evaluation will be submitted to the Regional Board. Member agencies will review existing practices, policies and ordinances to determine where improvements can be made to minimize risk to the environment and human health to the maximum extent practicable. If it is determined that they are not adequate, additional or revised policies or ordinances will be adopted. A summary of the review and recommended revisions will be submitted to the Regional Board.

**Outreach to Residents:** Advertising Campaigns over the past four years the Program has spent over \$500,000 on outreach campaigns aimed at reducing the use of insecticides. For example, the Program participated in the Bay Area Stormwater Management Agencies Association's (BASMAA) regional television advertising campaign "When Ants Invade," which promoted less toxic pest control practices and won a national advertising industry award. The Program has also funded radio, billboard and

## SECTION 4

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newspaper ads. The Program will continue to employ various media to reach residential audiences and encourage the use of a less toxic, integrated pest management (IPM) approach.

**Point of Purchase Campaign** The Program is participating in the innovative “Our Water, Our World” IPM campaign. Through the campaign the Program encourages stores that sell insecticides to also stock and promote the sale of less-toxic alternatives. Over 20 stores in the county are currently participating. The Program will aggressively market the IPM campaign to other stores with the goal of having at least 40 stores participating within the next two years. Through the distribution of printed material and information on its website, the Program will promote the IPM campaign to residents

**Distribution of Informational Material** The Program has printed and distributed over 250,000 pesticide-related brochures, fact sheets and informational guides. These materials are distributed by the Program and its member agencies. The Program has been constructing and staffing a stormwater exhibit at the County Fair for the past seven years and has maintained a booth at the Home and Garden show twice a year. Member agencies have been distributing material at their offices and at events such as watershed festivals and Earth Day fairs. The Program will continue these activities and will also distribute material through its website ([www.cleanwaterprogram.com](http://www.cleanwaterprogram.com)).

**Outreach to Commercial Facilities:** Some commercial facilities hire licensed applicators or self-apply insecticides.

Through the Industrial/Commercial Discharge Control Component of the Program, the municipalities will conduct outreach to selected business sectors. The Program will develop or adapt outreach materials that are appropriate for specific business sectors. These materials will be distributed by the municipalities as part of their regular inspection programs. The Program intends to target retail food establishments in Fiscal Year 2001/02.

**Partner with Licensed Pest Control Applicators:** Licensed pest control applicators apply approximately half of the diazinon used in Alameda County (Scanlin and Cooper, 1997). Any successful effort to minimize the environmental impact associated with insecticide use will need to have the support of the licensed applicators. The Program is committed to working with the licensed applicators to develop an approach that will allow them to maintain their profitability and provide an effective service to their customers in a way that minimizes environmental impacts. The Program will contact licensed applicators in the county, and will work (with those who are willing) to set up a program to minimize water quality impacts from structural pest control applications. The Program will attempt to coordinate this effort with other programs such as the Bio-Integral Resource Center.

**Partner with Other Agencies:** County Agricultural Commission The Alameda County Agricultural Commission (Commission) has been very involved in the effort to reduce environmental impacts of insecticide use. Representatives of the Commission have attended the Urban Pesticide Committee



and other related meetings. The Program will coordinate with the Commission in the development of outreach efforts, particularly for licensed applicators.

Household Hazardous Waste There are three permanent household hazardous waste (HHW) facilities in Alameda County. The Program has coordinated with the HHW program in the past and will continue to coordinate with the HHW program to promote the proper disposal of insecticides.

**Monitoring and Special Studies:** The Program has taken a lead in evaluating the sources of diazinon in stormwater in the Bay Area. In fact, one of the Program's studies, Scanlin and Feng (1997), was cited extensively in U.S. EPA's diazinon reregistration (U.S. EPA, 1999). The Program will continue its effort to provide information that will assist in the development of effective control measures.

Develop an Application/Runoff Model The Program is in the process of developing a computer model of the application and runoff of insecticides from an urban area. Certain insecticides or formulations of insecticides may be more likely to be transported by stormwater. The SWMM-based model uses properties such as water solubility, vapor pressure, and environmental persistence to predict stormwater impacts of insecticide use. The Program believes that the model will be useful as a tool to evaluate the impact of alternative control strategies as well as in

evaluating the potential impacts of insecticides that will replace diazinon.

Track Trends in Diazinon Concentrations and Stormwater Toxicity

The Program will continue to track diazinon concentrations and toxicity in stormwater runoff to assess the effectiveness of its control activities and monitor the effect of the diazinon ban. A detailed sampling plan will be included in the Program's Long Term Monitoring Plan (draft available, August 2001).

**Participate in the Regulatory Process:**

The Program will coordinate with BASMAA, the California Stormwater Quality Task Force, and the Urban Pesticide Committee to provide data, express concerns, and request consideration of its issues in U.S. EPA's and CDPR's insecticide registration decisions.

## ***MERCURY***

### **Problem Definition**

Human exposure to mercury has been shown to cause damage to the liver, kidneys, brain and central nervous system; resulting in loss of physical coordination, mental retardation blindness and even death. Developing fetuses and young children are especially susceptible to poisoning.

**Table 4-1: Estimated Annual Loadings of Mercury to San Francisco Bay**

Source	Estimate of Annual Load (kg/yr)
Central Valley Watershed Sources	607
Within Basin Watershed Sources	168
Atmospheric Deposition	15
Sediment Remobilization	500
Wastewater Discharge	44
Total	1304

(Modified from Abu-Saba and Tang, 2000)

The National Academy of Sciences<sup>1</sup> (NAS) recently completed an independent study of the toxicological effects of methyl mercury to assist the U.S. EPA. Fish consumption is the major source of human exposure to methyl mercury in the U.S. The study found that chronic, low-level prenatal methyl mercury exposure from maternal consumption of fish has been associated with poor performance by offspring on neurobehavioral tests. The study found that these neurodevelopmental deficits are the most sensitive, well-documented effects of low-level, chronic exposure to methyl mercury. While the majority of the U.S. population has a low risk of adverse effects from methyl mercury exposure, individuals who regularly consume fish may have high methyl mercury exposure and demonstrate observable effects. The study also concluded “because of the beneficial effects of fish consumption, the long-term goal needs to be a reduction in the concentrations of MeHg in fish rather than a replacement of fish in the diet by other foods. In the interim, the best method of maintaining fish consumption and minimizing Hg [mercury] exposure is the consumption of fish known to have lower MeHg concentrations.”

Analysis of fish tissue samples conducted on fish caught in the San Francisco Bay between 1994 and 1997 showed that concentrations of mercury exceeded established screening levels, suggesting potential health concerns for consumers of Bay fishes (Davis, 1998). Subsequent to the 1994 fish sampling, the California Office of Environmental Health and Hazard Assessment issued an interim Fish Consumption Advisory for all of San Francisco Bay, partly based on mercury concentrations.

### Sources and Loadings

Mercury is used in the manufacturing of such items as thermometers, fluorescent lamps, batteries, paints, and other household products. Of particular importance to the Bay Area is the presence of several large natural deposits of mercury within the San Francisco Bay watershed. Much of this mercury was mined during and after the Gold Rush for use in mining operations.

The two largest sources of mercury to Bay waters are inflow from Central Valley watersheds and remobilization of Bay sediment, which account for 46% and 38% of the total load respectively (see Table 4-1). Much of the mercury in

these two sources is a remnant of its historic use in amalgamating gold.

The next largest category of sources of mercury to Bay Waters, is input from local watersheds, which accounts for approximately 13% of the total load. This category encompasses numerous sources, the largest being mercury from the New Almaden mining area in Santa Clara County that accounts for about 30% of the load from local watersheds (that is, 4% of total Bay load). Other sources contributing to the load from local watersheds include air deposition and soil erosion. Local sources contributing to air deposition are not well quantified but significant sources are believed to include crematoria, cement processing plants, stationary and mobile sources of fossil fuel combustion, and broken fluorescent lamps. Some portion of this mercury is deposited on urbanized surfaces in the county and flows to the Bay in stormwater runoff.

## **Challenges**

Reducing levels of mercury in stormwater discharges poses a number of regulatory and technical challenges. Following is a brief description of some of these challenges.

**Regulatory Obstacles:** Many of the sources contributing mercury to stormwater runoff are beyond the control of local government, for example, some of the mercury is from global sources, and some is from local air sources, such as cement processing plants and crematoria that are regulated by the California Air Resources Board. The California Department of Toxic Substances Control (DTSC) under the Universal Waste Rule regulates the

recycling and disposal of fluorescent lamps.

**Technical Obstacles:** Because mercury bioaccumulates in the food web, minute quantities of mercury in water and sediment can be hazardous. As with other pollutants, removing these minute quantities of mercury from a large volume of water in a short period of time poses a significant challenge. In addition, standard treatment technologies such as detention basins and wetland treatment systems may actually increase the methylation of mercury. This would exacerbate the problem because methyl mercury is the form that bioaccumulates in fish the most rapidly.

## **Program's Approach**

### **Focus on Fluorescent Lamps:**

Fluorescent lamps contain a small amount of mercury with most current generation lamps containing from 10 to 21 mg/bulb. Abu-Saba and Tang (2000) estimate that 13 million fluorescent lamps are disposed of each year in the Bay Area and from this 10-130 kg/year of mercury is released to the environment. Recycling technology is available, and the Regional Board staff has concluded that the recycling of fluorescent lamps is "one of the most effective, readily implementable measures" to reduce the discharge of mercury to the Bay (Abu-Saba and Tang, 2000).

Lead by Example As is the case with the use of insecticides, municipalities use only a tiny fraction of the fluorescent lamps used in the Bay Area. However, the member agencies believe they should set an example for county residents and businesses by ensuring that they minimize the risk to the environment

## SECTION 4

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and human health. The agencies first step will be to conduct a review of their current practices regarding the recycling or disposal of fluorescent lamps. The next step will be to evaluate the results of the survey to determine if these practices could be revised to minimize the risk of mercury release to the environment. The results of the survey and evaluation will be submitted to the Regional Board.

Outreach to Businesses The commercial sector is the largest user of fluorescent lamps. Therefore, the Program will target its initial outreach effort towards businesses. The Program will work with the business community to identify current fluorescent lamp recycling and disposal practices and potential obstacles to increasing the level of recycling. The Program plans to work with the commercial sector and relevant entities such as the Department of Toxic Substances Control (DTSC), the Household Hazardous Waste program, recycling facilities, and the Regional Board to minimize obstacles and provide incentives for recycling. The Program will also develop or adopt outreach material and distribute it to businesses, either through direct mail or in conjunction with the municipalities' Industrial/Commercial inspection program.

Support Changes to Fluorescent Lamp Regulations Current regulations allow businesses to dispose of up to 25 fluorescent lamps at a time as solid waste. The Program will attempt to work with DTSC and other agencies to support and encourage changes to regulations that would promote increased recycling of fluorescent lamps.

Coordinate with Green Business Program The Green Business Program (GBP) helps businesses comply with environmental regulations, and then go beyond compliance to conserve energy, water and other resources, and reduce pollution and waste ([www.abag.ca.gov/bayarea/enviro/gbus/gb.html](http://www.abag.ca.gov/bayarea/enviro/gbus/gb.html)). The Program has been a major supporter of the GBP for several years, and will coordinate with them to promote the recycling of fluorescent lamps at GBP facilities.

Coordinate with Household Hazardous Waste There are three permanent household hazardous waste (HHW) facilities in Alameda County. The Program will coordinate with the HHW program to promote the recycling of fluorescent lamps and other mercury containing products.

**Other Mercury Related Efforts:**  
Participate in the Regulatory Process The Program has been an active participant in the Regional Board's Mercury Council and will continue to support the Regional Board's effort to develop a reasonable approach to solving the mercury problem in the Bay. The Program will also coordinate with BASMAA and the California Stormwater Quality Task Force to develop or support legislation that will help reduce levels of mercury in the Bay.

Track Trends in Mercury Concentrations in Creek Sediment During FY 2000/01 the Program conducted an extensive survey of mercury levels in creek and storm drain sediments throughout the county (Gunther, et al., 2001). During FY 2001/01 the Program will conduct a follow up survey. The Program will

continue its effort to develop information that will assist in the development of effective control measures. The Program is in the process of developing a long-term monitoring plan that will incorporate sediment sampling for mercury. A detailed sampling plan will be included in the Program's Long Term Monitoring Plan (draft available, August 2001).

## **COPPER**

### **Problem Definition**

At very low concentrations, copper is beneficial to aquatic organisms, but at higher concentrations it can be extremely toxic. This toxicity to aquatic life can occur at levels that are not harmful to humans.

The Bay is currently listed as impaired due to copper. However, recent studies have suggested that the Bay should not be listed as impaired, and the Regional Board has indicated that copper may be removed from the list of impairing pollutants on the condition that activities are undertaken to prevent increases in discharges of copper.

### **Sources and Loadings**

Copper is a naturally occurring element that is found in many everyday items, including products associated with building construction, electronic equipment, automobiles, and agriculture. There are a number of significant sources for copper loadings to Bay, but the most significant is automotive vehicle usage. Automobile emissions often contain small amounts of copper. More significantly, brake pads can

contain as much as 20% copper by weight. Recent research suggests that brake pad wear may be the largest single contributor of copper to the Bay, adding as much as 40% of the copper in stormwater runoff (Regional Water Quality Control Plant, 1997).

Another potentially significant source of copper to urban runoff is from its use in building construction. The use of copper materials in ornamental applications, gutters, down-spouts, roofs, and algae-resistant treatments for shingles all have the potential for contributing copper to stormwater runoff. Additional significant sources of copper loadings to the Bay include industrial and wastewater discharges; the use of copper in agricultural operations and water treatment systems; and the erosion of native soils, which contain small quantities of copper.

### **Challenges**

Reducing copper levels in stormwater offers challenges similar to reducing diazinon and mercury for both source control and treatment. For example, the largest source of copper to stormwater is believed to be brake-pad wear. As local government agents, Program members are not able to regulate the manufacturing or use of brake pads. Treatment is also problematic since the dissolved form of copper causes toxicity and occasionally exceeds the chronic water quality standard. As with diazinon, dissolved constituents cannot be removed by standard treatment technologies, which rely on filtration or settling of particulates.

### **Program's Approach**

**Brake Pad Partnership:** The Brake Pad Partnership is a nationwide effort to reduce the level of copper in brake pads. A coalition including stormwater programs, brake pad manufacturers, and the U.S. EPA are working together to find a solution. The partnership was initiated in the Bay Area, and the Program was one of its initial sponsors. The Program continues to support the effort and believes it is the best approach to addressing the problem.

**Copper in Building Materials:** Barron (2000) estimated that 20% of the copper in runoff from the Palo Alto (CA) area was from the use of copper in building materials. This was partly associated with a large number of luxury homes being constructed in that area at this time. The conditions in Alameda County may be quite different. However, the Program believes that this source of copper is worth looking into, since it could be significant and is one of the few areas where local governments have the potential to initiate a source control effort. The first step the Program will take will be to review construction practices in the county to assess their potential copper contribution. Based on the results of the assessment, municipalities will review and revise their practices if appropriate.

**Municipal Maintenance Activities:** Street sweeping has the potential to remove some of the copper from brake pad wear and other sources. The municipalities will continue their street sweeping activities in accordance with the municipal maintenance performance standards.

**Monitoring and Special Studies:** The Program will continue to track the

concentration of copper in stormwater runoff in accordance with its Long Term Monitoring Plan (draft available in August 2001), the Program will conduct field studies or literature reviews as necessary to assist with the development and implementation of control measures. The Program also is contributing funding to the North Bay Copper and Nickel Study to investigate the effects of copper on aquatic life.

## **POLYCHLORINATED BIPHENYLS**

### **Problem Definition**

U.S. EPA lists Polychlorinated Biphenyls (PCBs) as a potential carcinogen. Additionally, PCBs are suspected of having negative impacts on the human immune system, reproductive system, nervous system, endocrine system, and digestive system (additional health effects information available at <http://www.epa.gov/opptintr/pcb/effects.htm>). Although their manufacture is now banned in the United States, PCBs continue to pose a serious risk due to their persistence in the environment.

PCBs accumulate in fatty tissue, hence organisms with a higher fat content will tend to accumulate more PCBs than organisms with a lower fat content. This is important to human health in that several of the more common food fishes in the Bay (e.g., striped bass, white croaker) are marked by relatively high fat content. Sampling conducted on Bay food fishes between 1994 and 1997 showed that concentrations of PCBs in fish tissue exceeded screening values, suggesting potential health concerns for consumers of these fishes (Davis *et al.*, 1998). Subsequent to the 1994 fish

sampling, the California Office of Environmental Health and Hazard Assessment issued an interim fish consumption advisory for all of San Francisco Bay, partly based on PCB concentrations found in Bay fishes.

### **Sources and Loading**

PCBs were used in the past in a number of industrial and commercial applications; most importantly as coolants, lubricants, and insulators in electrical equipment such as transformers and capacitors. Additionally, PCBs at one time found many other uses in products such as paints, sealants, preservatives, and fire retardants.

In the mid-1960s, questions regarding the widespread presence of PCBs and their potential health impacts began to raise concern. Commercial production and import of PCBs into this country was banned by the U.S. EPA in 1979, though some manufacture of “closed system” products (having little potential for escape of PCBs from the system) was allowed to continue. By 1984, virtually all manufacture and distribution of products containing detectable levels of PCBs was banned by the U.S. EPA (Hetzel, 2000).

As with mercury, a large source of PCBs to the Bay water and biota is contaminated Bay sediment. The Regional Monitoring Program’s sampling effort has detected areas of contaminated sediment adjacent to heavily industrialized land use. Of particular interest to the Program are elevated concentrations found in the Oakland Estuary, San Leandro Bay, and Emeryville Crescent.

Additional contaminated sediment may still be moving towards the Bay from contaminated sites within local watersheds. An initial survey of creek and storm drain sediment conducted in 2000 found a few sites with elevated concentrations (Gunther, et al., 2001). A follow-up study will be conducted in 2001 to determine if sources can be identified.

### **Challenges**

The immediate obstacle to addressing PCB contamination is that the sources are dispersed and largely unidentified.

### **Program’s Approach**

**Monitoring and Special Studies:** The first step in addressing the discharge of PCBs in stormwater is to develop a better understanding of sources within the county. To do this the Program has initiated a multi-year study of the level of PCBs in creek and storm drain sediments throughout the county. A report on the initial round of sampling has been completed (Gunther et al., 2001). Follow-up sampling upstream of sites where elevated concentrations were found will be conducted during FY 2001-2001.

**Participate in the Regulatory Process:** The Program has been participating actively in the Regional Board’s TMDL stakeholder process and will continue to do so.

### **Notes**

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<sup>1</sup> National Research Council. 2000. Toxicological Effects of Methylmercury. Prepublication copy.





## **SECTION 5**

## **PERFORMANCE STANDARDS**

Performance standards that are implemented by member agencies exist for the following five areas of the Plan:

- Public Information and Participation
- Municipal Maintenance Activities
- New Development and Construction Controls
- Illicit Discharge Controls, and
- Industrial and Commercial Discharge Controls

These performance standards define a large part of what each member agency must do to implement the Plan and comply with the NPDES permit. In addition, the Plan's Pollutant Reduction Plans for specific impairing pollutants also describe what the member agencies need to do to implement the Plan. It is expected that agency-led activities in the Pollutant Reduction Plans that prove worthwhile for long-term implementation will eventually be integrated into the performance standards.

### **CHANGES FROM PREVIOUS PERFORMANCE STANDARDS**

The following performance standards are generally the same as during the previous SWMP. Some relatively minor modifications have been made to clarify and improve the performance standards. For example, the performance standards for Municipal Maintenance have been reduced and simplified by eliminating details about Best Management Practices and by retaining the more substantive sections that describe what the performance standards are intended to accomplish. A more substantive change

was to move requirements for insect management from these performance standards to the Pollutant Reduction Plans. This change reflects the priority that will be placed on controlling the use of insecticides, the still developing approach for controlling insecticides and the need to involve all of the departments within the member agencies in minimizing insecticide usage.

The improvements in the performance standards reflect the collective experience of everyone who has been implementing the performance standards. Each of the proposed changes was discussed at length by the subcommittee that is directly involved in helping the member agencies to understand and implement the performance standards.

### **OPPORTUNITY TO PROPOSE ALTERNATIVE PERFORMANCE STANDARDS**

As the Program continues to evolve, it is becoming increasingly important to recognize agency and watershed-specific differences. In order to allow appropriate tailoring and improvement of the performance standards, each agency retains the flexibility to propose alternative performance standards for its use that will accomplish equivalent or better water quality improvements than the area-wide performance standards described in the subsequent sections. Alternative agency-specific performance standards must be submitted in writing to the Regional Board's Executive Officer, and the alternative performance standards will not become effective until

## **SECTION 5**

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approved by the Executive Officer, and that approval will be presumed unless it is rejected in writing within 90 days of submittal.

### ***FLOOD CONTROL DISTRICT RESPONSIBILITIES***

Some of the performance standards are appropriate for the Alameda County Flood Control and Water Conservation District (District) and Zone 7 of the District, and others are not. For example, the ACFC&WCD and Zone 7 do not conduct business inspection, nor do they sweep streets. Performance standards that each city, the county, ACFC&WCD and Zone 7 are responsible for implementing use the term “agency(ies)” in the performance standard. Performance standards that each city and the county are responsible for implementing, but not the District and Zone 7 of the District, use the term “municipality(ies).”

## **PUBLIC INFORMATION AND PARTICIPATION**

### **I. PARTICIPATION IN PI/P SUBCOMMITTEE AND GENERAL PROGRAM ACTIVITIES**

1. Each agency will designate a person responsible for implementing its Public Information/Participation (PI/P) activities and for acting as a liaison with the PI/P Subcommittee. This designated person will stay sufficiently informed by attending Subcommittee meetings or using other means to participate constructively in PI/P Subcommittee decisions and activities.
2. Each agency will chair the PI/P Subcommittee on a rotating basis so that the burden of providing leadership for the Program is shared in an equitable manner among all of the agencies.
3. Each agency will complete its PI/P quarter or semiannual deliverable reports within the schedule established by the General Program.

### **II. INTERNAL AGENCY COMMUNICATION AND TRAINING**

#### **City Staff and Officials**

Each agency is responsible for identifying, developing, and communicating information about the Program so that its clean water staff, new employees involved with the Program, agency managers, and elected

officials are well informed about their role in implementing the Program and the Program's requirements and progress. Each agency will provide information at least annually to these targeted groups.

#### **Procedures and Training for Handling Telephone Calls from the Public about Stormwater**

- Each agency will have a procedure that it follows for answering and efficiently routing stormwater related telephone calls to the appropriate municipal staff for handling.
- Agency staff assigned to answering or responding to telephone calls will be trained and familiar with the established procedures.

### **III. USE OF PROGRAM OUTREACH**

As described in Task 5 of the PIP component work plan (Section 3), the General Program will be responsible for conducting surveys to evaluate the effectiveness of public education and outreach efforts implemented by the member agencies and by the General Program.

#### **Distribution of Program Information Pieces**

- Each agency will be responsible for identifying, in a written plan maintained at its offices, how it will distribute copies of General Program informational materials.

## SECTION 5

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This plan will be available to the Regional Board upon request.

- Within two years of receiving its allotment from the General Program, each agency will have the goal of completing distribution of these materials to the target audience. Approximately one-half or more of the materials should be distributed within twelve months of receiving the allotment.
- Each agency will be responsible for tracking its inventory of General Program educational materials in order to be able to determine the need to re-order.

### **Storm Drain Inlet Stencils and Signs**

- Each municipality will have stenciled or in some other ways signed ninety percent of its municipality-owned storm drain inlets or conducted activities that are demonstrably equivalent in terms of achieving awareness by residents that materials should not be disposed down storm drains. Demonstrably equivalent means that the municipality will provide examples of comparable alternative activities or have available a valid survey to show that its residents are as aware of where storm drains lead as are residents in comparable communities with stencils or signs. A description of the demonstrably equivalent activities must be submitted in writing and approved in advance by the Regional Board's Executive Officer, and this approval will be presumed unless

disapproved in writing within 90 days of its submittal.

- As a goal all stencils and signs installed will be maintained sufficiently to be readable.
- In order to provide an educational opportunity, each municipality will optimize the use of local volunteers to assist with the stenciling or signage activities.

## **IV. AGENCIES' COMMUNITY OUTREACH PROGRAM**

### **General Needs**

The community outreach activity must be reasonably significant in terms of either the level of participation of the member agency and/or the number of people reached by the event.

Agencies will participate in community outreach activities from the areas listed below (under A. through F.) for the purpose of communicating the general stormwater pollution prevention message and complementing the General Program's specific message(s) for its targeted audience(s). Every other year at least one of these activities must be from Category F. The following provides the number of different activities that will be participated in annually:

Over 100,000 in population

- each municipality will participate in eight activities;

Between 50,000 and 100,000

- each municipality will participate in six activities;

Less than 50,000; Alameda County Flood Control and Water Conservation District (District); and Zone 7 of District

- each agency will participate in four activities.

**A. Participate in Existing Community Events**

Distribute ACCWP information by participating in existing community events (fairs, festivals, exhibits, etc.) held within its or a nearby jurisdiction. This participation may include the setting up of a booth, kiosk display, or other creative means of communicating the general stormwater pollution prevention message, using a specific message to a target group, or make a presentation to a local community service group.

**B. Plan/Implement New Community Events**

Play a major role in planning and staging a community or citywide event, examples include the following:

- Earth Day or other festival or fair;
- Business mixer;
- Seminar or target group; and/or
- Contests.

**C. Contact Media and Conduct Advertising**

Maintain local media contacts with local newspaper, radio, and television stations to be able to communicate the general stormwater pollution prevention

message, complement the General Program's specific targeted audience(s) and message(s) and complement regional PI/P activities. This local media contact may include: adaptation and/or development and distribution of stormwater related press releases or use of paid advertising including advertising in local telephone directories.

**D. Provide Program Information Through Other Venues**

The following types of venues may be used:

- Agency newsletter;
- Other municipal newsletter;
- Local magazine;
- Utility bill inserts;
- Mailing to target group; and
- WebPages.

**E. Develop and Implement Integrated Outreach Approaches**

This area includes activities, such as the following:

- Point of purchase display and giveaway;
- Plan, create and distribute videos;
- Create and stage a play;
- Develop special displays or kiosks for your message especially interactive ones (such as slides in movie theaters);
- Develop/implement program for school curriculum and provide equipment;
- Support and partner with

other agencies to increase or improve pollution prevention capabilities (e.g., helping set up oil and/or antifreeze collection facilities); and

- Make and place signs on sweepers or other vehicles; and
- Place messages on workers' T-shirts.

#### **F. Develop Watershed Awareness**

This area includes one or more of the following types of activities that are listed as examples:

- Identify and support a friends of a watershed group and encourage creek cleanups (or if this is infeasible, lagoon or shoreline cleanups) or adopt-a-creek or other volunteer monitoring and resource inventorying activities.
- Conduct a creek cleanup (or if this is not feasible, lagoon or shoreline cleanups) within its jurisdiction on an annual basis; and
- Participate in a local event in its jurisdiction or neighboring jurisdiction as part of the Coastal Commission's annual Coastal Clean-Up Day and/or as part of Earth Day.

#### **Special Needs**

Each municipality will identify whether there are any special needs of some of its residents. An example of a special need would be if a significant percentage of the residents are native speakers of a language other than English or Spanish who would be able to better participate

in the municipality's stormwater pollution prevention efforts by having materials available in their native language.

If a municipality has identified a special need not being addressed by the General Program, it will, on its own or in collaboration with other member agencies, develop and distribute translated materials or other special materials needed to fill the special need.

#### **V. COORDINATION WITH SCHOOLS**

1. If not being performed by others, each municipality will help to distribute to schools within its jurisdiction information provided by the General Program about its school outreach activities, such as, the Bay Savers, Kids in Creeks/Gardens/Marshes/Watersheds workshops, and community stewardship grants.
2. The General Program will continue to develop and produce materials for outreach to schools. Each municipality will make these materials available to schools in its jurisdiction, if not distributed by the General Program or other methods. This may include each municipality disseminating information on how to obtain copies of these materials if this is a more efficient way to achieve distribution.
3. Each municipality will also work with the local school district to encourage that appropriate stormwater pollution prevention and aquatic resource protection information will be taught to

school children within its jurisdiction.

## **MUNICIPAL MAINTENANCE – GENERAL**

The following General Performance Standards apply to all municipal maintenance activities.

### **I. SPILL RESPONSE**

1. If the spill is suspected to be toxic or hazardous materials, maintenance staff will call the public safety dispatcher, 911, and/or the local illicit discharge coordinator.
2. If non-hazardous materials are spilled, maintenance staff will contain the spill area immediately to prevent additional discharge of pollutants into the storm drain system and clean as soon as practicable.
3. Maintenance staff will report spills to, and work with, the agency's illicit discharge coordinator, or appropriate party, to determine the appropriate follow up response (e.g., track the source of the spill and identify product labels that have a bar code identifying the originating agency, contact Building and Planning Departments, send a clean-up bill to the responsible party, etc.).

### **II. TRAINING**

Each agency will train employees and contractors in the use of the Spill Response Performance Standards as appropriate.

### **III. DISPOSAL OF WASTE**

### **MATERIAL AND CHEMICALS**

1. Each agency will ensure proper handling and disposal of material removed from streets and storm drainage facilities to prevent discharges of pollutants to surface waters or groundwater.
2. Each agency will dispose of excess chemicals at an Alameda County Household Hazardous Waste Facility or other approved disposal location (or recycle the chemical.)
3. Each agency will properly dispose of or recycle used solvents/chemicals.

### **IV. CONTRACTORS**

1. Each agency shall incorporate the municipal maintenance performance standards into municipal contract specifications.
2. Each agency shall provide volunteers and contractors with educational material describing the Municipal Maintenance Performance Standards as appropriate.



## MUNICIPAL MAINTENANCE – STREET CLEANING

### I. STREET CLEANING FREQUENCY

1. Each municipality will clean streets on at least a monthly average unless an alternative schedule is approved as described in number 2 below. In calculating this average, the number of curb miles swept in a fiscal year divided by the number of curb miles within a municipality will equal twelve or greater. The removal of cars should be encouraged by having a fixed sweeping schedule. Sweeping will be prioritized to clean the streets that have been found to be typically the dirtiest and to conduct sweeping prior to the rainy season.
2. If a municipality chooses to clean streets less than on a monthly average the rationale for the alternative standard must be describe in a written action plan. The rationale should demonstrate that the alternative schedule is equivalent in terms of protecting water quality as the annual average sweeping. The action plan must be submitted to the Regional Board as part of the Mid Fiscal Year Report or the Annual Report. The alternative standard will not be effective until approved by the Regional Board's Executive Officer, and that approval will be presumed unless it is rejected in writing within 90 days of its submittal.

### II. STREET CLEANING OPERATION TO MAXIMIZE POLLUTANT REMOVAL

1. Each municipality will utilize, as appropriate, the Street Cleaning BMPs to maximize pollutant removal during sweeping activities. When purchasing new sweepers, each municipality will review alternative equipment and new technologies to maximize pollutant removal.

### III. PROBLEMS ASSOCIATED WITH EFFICIENT STREET CLEANING

#### *Getting Parked Cars Off Streets*

1. Each municipality will maintain a consistent sweeping schedule.
2. Each Agency will utilize, as appropriate, the Street Cleaning BMPs to keep curbed areas clear during street cleaning.

#### *Removing Large Accumulations of Leaves Just Prior to Sweeping*

Each municipality will have a leaf removal option available to residents. The leaf removal may be conducted by an entity other than the municipality, for example, curbside leaf pick up by a waste management company. Each municipality will utilize, as appropriate, the Street Cleaning BMPs for specific leaf handling methods.

### *Maintaining Trees Near Streets*

Each municipality will provide operators with adequate resources to conveniently report trees interfering with street cleaning.

## **IV. RECORD KEEPING**

1. Each municipality will track miles swept using a broom odometer or by tracking mileage only when cleaning (do not include mileage to an area).
2. Each municipality will track volume or weight of material removed.

## **MUNICIPAL MAINTENANCE – STORM DRAIN FACILITIES AND WATERCOURSES**

### **I. ROUTINE INSPECTION AND CLEANING**

1. Each agency will inspect, and clean as necessary, storm drainage facilities (inlets, culverts, V-ditches, pump stations, open channels, and watercourses), once a year on average unless an alternative schedule is approved as described in number 2 below. The inspections and needed cleaning will preferably occur prior to the rainy season. In calculating this average, some facilities may be inspected more than once per year and others less than once per year.
2. If an agency chooses to inspect, and clean as necessary, storm drainage facilities (inlets, culverts, V-ditches, pump stations, open channels, and watercourses), less than an annual average the rationale for the alternative standard must be described in a written action plan. The rationale should demonstrate that the alternative schedule is equivalent in terms of protecting water quality as the annual average inspection. The action plan must be submitted to the Regional Board as part of the Mid Fiscal Year Report or the Annual Report. The alternative standard will not be effective until approved by the Regional Board's Executive Officer, and that approval will be presumed unless it is rejected in writing within 90 days of its submittal.
3. When cleaning storm drainage facilities, each agency will remove the maximum amount of material at the nearest access point to minimize discharges to watercourses.
4. Each agency will maintain a storm drainage facility inspection and maintenance plan. The Plan includes:
  - a. Schedule for inspecting storm drainage facilities;
  - b. Rational for determining when to clean inlets, etc.;
  - c. Results of an evaluation to install additional screens or grates near or in inlets to inhibit discharge of litter, but where flooding is not a concern;
  - d. Identification of target areas that tend to accumulate excessive pollutants for cleaning and/or public education; and
  - e. Inventory of the storm drain system.
5. Unless provided for in an alternative plan approved by the Regional Board's Executive Officer, each agency will inspect twice a year storm drainage facilities that tend to accumulate excessive sediment and debris: prior to the rainy season to prevent flooding and discharge of pollutants and after the rainy season to remove sediment and debris.
6. Each agency will inspect storm drain inlets monthly during the wet season

## **SECTION 5**

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in areas suspected of containing illegal dumping, and clean as necessary.

### **II. RECORD KEEPING**

1. Each agency will report the amount of material removed when cleaning storm drainage facilities in monthly record keeping forms.
2. Each agency will document and track spill incidents and response to spill incidents either as described in the "Monthly Record Keeping Form" or as part of the Illicit Discharge Quarterly Summary Form.
3. Each agency will document and maintain the following records monthly for pump stations and watercourses:
  - a. Areas/sites inspected,
  - b. Silt and vegetation removal practices,
  - c. Areas where man-made materials are removed, type and estimate of quantity or weight removed,
  - d. Disposal practices and any testing results,
  - e. Spill incidents and follow-up actions,
  - f. Application of chemicals (type used, areas applied), and
  - g. Areas for possible improvements.

### **III. INSPECTION AND MAINTENANCE**

1. Each agency will inspect pump stations after the wet season and develop a schedule for maintenance activities prior to the next wet season.

2. Each agency will inspect trash racks and oil absorbent booms during or after significant storms. Remove debris in trash racks and replace oil absorbent booms as needed.

### **IV. PERMITS AND OTHER REGULATORY REQUIREMENTS**

Each agency will coordinate with the California Department of Fish and Game, the U.S. Army Corps of Engineers, and other agencies as appropriate in order to comply with regulatory requirements prior to commencing work.

### **V. VEGETATION**

See procedures in the Municipal Maintenance BMP Manual.

## **MUNICIPAL MAINTENANCE – CORPORATION YARDS AND AUXILIARY STORAGE AREAS**

### **I. GENERAL BMPs**

1. Each agency will ensure that necessary safety equipment and spill containment kits are readily accessible in areas where chemicals are used, in fueling areas, and in areas that have a potential for spills. Each agency will inspect safety equipment (eye flushing stations, etc.) regularly to ensure they are operational.
2. Each agency will assign one person the primary responsibility for ensuring that BMPs are implemented. This person will also be responsible for ensuring that all persons using the facility are aware of BMPs.
3. Each agency will stencil inlets to the storm drainage system with a message such as "No Dumping, Drains to Bay".
4. Each agency will conduct facility surveys annually - possibly in conjunction with hazardous materials management and/or spill prevention inspections.
5. Each agency will have a Storm Water Pollution Prevention Plan (SWPPP) for each corporation yard.
6. Each agency will inspect the yard routinely to ensure that there are no illegal discharges to the storm drain system and that during storms, pollutant discharges are controlled to the maximum extent

practicable.

7. Each agency will sweep the corporation yard. The agency will dispose of material removed from streets and storm drainage facilities often to eliminate exposure to rainwater and runoff to the storm drain system.

### **II. WASHING VEHICLES/EQUIPMENT**

1. Each agency will clean all vehicles/equipment on designated wash pad areas or off-site if needed so washwater drains to the sanitary sewer or is recycled.
2. Each agency will ensure that wash pad area and sump are large enough so that all washwater drains to the sanitary sewer or recycling system. The agency will re-grade area if necessary or install dikes to convey washwater.

### **III. REFUSE HOLDING AREAS**

Each agency will store material removed from storm drainage facilities and streets on a concrete or asphalt pad in a contained area. The agency will drain liquids to the sanitary sewer or allow it to evaporate. If feasible, the agency will cover the storage area during the rainy season.

### **IV. FUEL DISPENSING AREAS**

1. Each agency will store spill

## **SECTION 5**

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containment kits nearby. If spills occur, the agency will use dry methods to clean the fueling area and follow procedures in the Hazardous Materials Business Plan (HMBP) and/or Spill Prevention Control and Countermeasure Plan.

2. Each agency will maintain signs reminding people not to "top off" tanks.
3. Appropriate spill equipment will be used when mobile fueling is implemented.
4. Each agency will cover fuel dispensing areas, when feasible. The agency will not conduct fueling over open ground (ground should be covered by concrete or asphalt protected with a sealant).

1. Each agency will minimize leaks from vehicles by performing routine inspections, repairing vehicles with significant leaks, and employing drips pans where appropriate.
2. Each agency will periodically dry sweep the area.

### **V. CHEMICAL USAGE AND STORAGE**

1. Each agency will store paint and other chemicals in an approved covered containment area. If 55-gallon drums containing hazardous materials or wastes are stored outside, each agency will keep drums in an approved containment area.
2. Each agency will minimize use of chemicals. The agency will use water-based paints and non-toxic chemicals as much as possible.

### **VI. FLEET MAINTENANCE/VEHICLE PARKING AREAS**

## **MUNICIPAL MAINTENANCE – LITTER CONTROL, ROAD REPAIR AND GRAFFITI REMOVAL**

### **LITTER**

1. Each agency will provide an adequate number of litter receptacles in commercial areas and other litter source areas. Agencies will make every effort to contain litter in receptacles.
2. Each agency will ensure litter receptacles are maintained on a frequent enough basis to minimize or prevent spillage.
3. Each agency will document and maintain the following records monthly:
  - a. Areas targeted for litter removal
  - b. Total amount of material removed

### **ROAD REPAIR**

#### **I. General**

1. Each agency will schedule excavation and road maintenance activities for dry weather, if feasible.
2. Each agency will perform major equipment repairs at the corporation yard, when practical.
3. When refueling or maintaining vehicles and equipment on-site, each agency will use a location away from storm drain inlets and creeks.
4. Each agency will recycle used

motor oil, diesel oil, concrete, broken asphalt, etc. whenever possible.

5. Each agency will contain diesel oil used to lubricate or clean equipment or parts.

#### **II. ASPHALT/CONCRETE REMOVAL**

Each agency will utilize, as appropriate, the Road Repair BMPs for protecting storm drain inlets prior to breaking up asphalt or concrete. The agencies will clean afterwards by sweeping up as much material as possible.

#### **III. PATCHING AND RESURFACING**

1. Each agency will utilize, as appropriate, the Road Repair BMPs for protecting storm drain inlets prior to patching and resurfacing activities.
2. Agencies will not stockpile materials in streets, gutter areas or near storm drain inlets or creeks unless these areas are protected.
3. Agencies will never wash excess material from exposed aggregate concrete or similar treatments into a street or storm drain inlet. Each agency will designate an unpaved area for clean up and proper disposal of excess materials.

**IV. EQUIPMENT CLEAN  
UP/STORAGE**

Each Agency will clean equipment at the end of the day at the corporation yard, when possible, and will cover sprayers and patching and paving equipment to prevent rainfall from contacting pollutants.

**GRAFFITI REMOVAL**

See graffiti removal BMPs in the Municipal Maintenance BMP Manual.



## NEW DEVELOPMENT AND CONSTRUCTION SITE CONTROLS

The following performance standards apply to all Clean Water Program member agencies for all construction activity including clearing, grading and excavation activities that result in the cumulative disturbance of 10,000 or greater square feet of land that would discharge stormwater to the municipally-owned storm drain system. A member agency may consider a project exempt from these performance standards if it would disturb less than 10,000 square feet of land and it does not cause substantial or potentially substantial adverse change in the quantity and/or quality of stormwater runoff generated from the site considering all four of the following conditions:

- The size of the project is negligible;
- The amount of land disturbed is insignificant;
- The potential impact on stormwater quality and quantity is insignificant; and
- The intensity of the construction activity is minimal.

### I. MEASURES AND POLICIES TO CONTROL THE QUALITY OF STORMWATER RUNOFF

1. Each agency will incorporate the New Development Subcommittee's conditions of approval into its standards for development, as appropriate.
2. Each agency will document permanent erosion and stormwater quality controls, controls during construction, and operation and maintenance of structural controls in conditions of approval for both public and private projects. Best

management practices (BMPs) will be selected from appropriate guidance materials.

3. Each agency will ensure that stormwater quality requirements are included in plans and contract specifications for municipal construction projects.
4. Each agency will implement design guidelines and practices that incorporate water quality protection measures for both public and private projects.

### *The Following Will Be Implemented when General Plans and Ordinances are Amended:*

1. Each agency will review and update General Plan policies and implementation measures that help preserve and enhance water quality.
2. Each agency will review and update legal authority provided in erosion control and stormwater management and discharge control ordinances.

### II. EDUCATIONAL ACTIVITIES

1. Each agency will provide educational materials (BMP flyers, Blueprint for a Clean Bay, etc.) to municipal staff, developers, contractors, construction site operators, and owner/builders, as appropriate. (Requires coordination with the PIP Subcommittee.)
2. Each agency will educate:

- Staff responsible for development application and plan review on stormwater quality issues and controls. Agencies will provide information on municipal design guidelines, ordinances, conditions of approval, contract specifications and protected sensitive areas.
  - Construction site inspectors on proper implementation and maintenance of erosion and sediment controls and materials/waste management BMPs.
  - Other municipal staff involved in development and redevelopment projects (e.g., capital improvement, public works, and/or building inspectors).
3. Each agency will provide pre-application materials containing information on stormwater controls and requirements to developers.
  4. Each agency will attach appropriate BMP information to building permits, as needed.
- III. DEVELOPMENT APPLICATION AND PLAN REVIEW**
1. Each agency will continue to evaluate the effects of development on stormwater runoff and wetlands in the CEQA process.
  2. Each agency will consider water quality impacts in the context of their review and possible approval of both public and private development projects.
3. Agencies will require public and private development projects to include site planning and design techniques to prevent and minimize impacts to water quality. These may include the following:
    - a. Minimize land disturbance.
    - b. Minimize impervious surfaces, especially directly connected impervious areas.
    - c. Use of clustering.
    - d. Preservation of quality open space.
    - e. Maintain (and/or restore, if possible) riparian areas and wetlands as project amenities, establishing vegetation buffer zones to reduce runoff into waterways.
  4. Each agency will require public and private development projects to include permanent stormwater quality controls, as appropriate, if sufficient site planning measures are not implemented or feasible.
- IV. EROSION AND SEDIMENTATION CONTROL**
1. Each agency will review its erosion control program for adequacy, and identify and implement any improvements needed in the following areas:
    - a. Enforcement authority (grading, erosion, and/or

stormwater control ordinances).

- b. Minimum BMPs required.
- c. Training and tools for inspectors.
- d. Information for developers and contractors.

- 2. As a condition of issuance of a grading permit, each agency will require developers to prepare, submit to the agency for review and approval, and implement an effective erosion and sediment control plan or similar administrative document that contains erosion and sediment control provisions.
- 3. Each agency will require developers to provide permanent erosion and stormwater controls on plans submitted for projects.

## **V. STATE GENERAL PERMIT**

Prior to construction of a project that disturbs  $\geq 5$  acres, each agency will require a copy of the Notice of Intent (NOI) sent to the State Water Resources Control Board for coverage under the Construction Activity Stormwater NPDES General Permit.

*The Following Will Be Implemented upon Adoption of the New Construction General Permit:*<sup>1</sup>

- 1. Prior to construction of a project that disturbs  $\geq 1$  acres, each agency will require a copy of the Notice of Intent (NOI) sent to the State

Water Resources Control Board for coverage under a Construction Activity Stormwater NPDES General Permit.

- 2. Prior to the construction of a project that requires the filing of an NOI, each agency will require a copy of the project's Stormwater Pollution Prevention Plan (SWPPP).

## **VI. CONSTRUCTION SITE FIELD CONTROLS**

- 1. Each agency will require that project applicants prepare and submit a Stormwater Quality Protection Plan<sup>2</sup> prior to the start of construction activity, to demonstrate that the owner, developer, and/or contractor has evaluated BMPs and provided those appropriate for protection of stormwater quality during construction activities.
- 2. Each agency will coordinate construction inspections and enforcement of corrective actions with Regional Board staff, if appropriate.
- 3. Each agency will inspect construction sites for adequacy of stormwater quality control measures on a regular basis, with the frequency of inspections based on considerations such as the size of the project, its potential impact on stormwater quality, and the amount of construction activity.

- 4. For construction sites requiring erosion sediment control plans, each agency will inspect sites prior to the beginning of the wet season

each year, to ensure that measures have been taken to prevent erosion and minimize discharges of sediment from disturbed areas.

5. For construction sites requiring erosion sediment control plans, each agency will inspect sites following each major storm event or series of events during the wet season of each year, to observe the effectiveness of erosion sediment control measures.
6. For project site inspections, inspectors will:
  - a. If available, review the Stormwater Quality Protection Plan prior to conducting the inspection.
  - b. Inspect for and effectively prohibit non-stormwater discharges, except those discharges which contain no pollutants.
  - c. Whenever possible, visually observe the quality of stormwater runoff after a major storm event.
  - d. Require proper implementation and maintenance of erosion sediment controls and material/waste management BMPs (e.g., covering stockpiled materials, designating work and storage areas) to minimize the discharge of pollutants.
  - e. If appropriate, document stormwater violations and corrective actions.

## VII. WATERSHED RESOURCE INVENTORY AND PLANNING

These activities will be coordinated with the Watershed Assessment and Monitoring (WAM) Subcommittee.

1. Each agency will develop and submit with the *Annual Report*<sup>3</sup> an approach and schedule for conducting a watershed management issues assessment based on guidance from the Regional Board and guidance being developed by the WAM Subcommittee as it becomes available.

*The Following Will Be Implemented when General Plans and Ordinances are Amended:*

1. Each agency will consider the criteria for sensitive areas as guidance when amending their General Plans.
2. Each agency will incorporate findings from the watershed resource inventories conducted by the WAM Subcommittee into General Plan amendments.

## VIII. POLICIES FOR MAINTAINANCE AND OPERATIONS OF FLOOD CONTROL CHANNELS AND WATER COURSES) –

These performance standards apply to all agencies that maintain creeks and flood control channels.

Each agency will consider potential benefits to habitat,

education, recreation, and water quality when planning flood control channel maintenance and improvements.

**IX. SUBCOMMITTEE MEETINGS AND WORKSHOPS**

1. At least one representative from each agency will attend the Program's New Development workshops.
2. Each agency will chair the New Development Subcommittee on a rotating basis so that the burden of providing leadership is shared equitably.
3. Each agency will designate a person responsible for implementing the New Development, Redevelopment, and Construction Site Controls Component and for acting as a liaison with the New Development Subcommittee. This designated person will stay informed sufficiently to participate in New Development Subcommittee decisions and activities.

## **ILLICIT DISCHARGE CONTROLS**

### **I. ILLICIT DISCHARGE CONTROL INSPECTION PROGRAM –**

These performance standards apply to all agencies.

1. Each agency will prepare a written Five-Year Action Plan that demonstrates the agency's commitment to conducting effective investigation, tracking, and elimination of illicit discharges and describes the level of effort for conducting these activities. The Action Plan will demonstrate that the agency has:
    - a. Identified, verified, and prioritized problem areas for investigation and/or repeat inspections.
    - b. Defined priority for investigation of all areas within their jurisdiction.
    - c. Demonstrated commitment to survey high priority areas annually.
    - d. Defined frequency of survey for second and/or third priority areas, until the entire agency's drainage area has been inspected at least once during the five-year period of the Action Plan.
    - e. Selected which agency or group will conduct the field surveys and estimated the number of labor hours required to implement the program. When more than one department is involved with conducting field surveys, determined how illicit discharge surveys and follow-up activities will be coordinated.
    - f. Established how activities will be documented.
    - g. Adopted the minimum enforcement procedures.
    - h. Developed procedures for enforcement or referral to an outside agency, including appropriate time periods for action.
- The Five-Year Action Plan will be submitted to the Regional Board by May 30, 2003.
2. Each agency will review annually and update as necessary its Five-Year Action Plan. The review will include an evaluation of field survey results from the previous year and an assessment of which types of non-stormwater discharges were most prevalent. Changes for the coming fiscal year will be submitted to the Regional Board by March 1.
  3. Each agency will ensure that designated illicit discharge inspectors are trained. Agencies

will provide inspectors with the knowledge and skills necessary to conduct effective field investigations, with guidance from the Industrial & Illicit Discharge Control (I&IDC) Subcommittee and Regional Board staff.

4. Each agency will develop or obtain accurate maps of the agency's storm drain system including major drain segments, reaches, and outfalls within the agency's jurisdiction.

## **II. CONDUCTING FIELD INVESTIGATIONS**

These performance standards apply to all agencies.

1. Each agency will conduct field investigations that include inspecting portions of the municipal storm drain system for potential sources of illicit discharges. Inspectors will:
  - a. Survey priority areas as defined in the Five-Year Action Plan and make observations. Record observed or suspected dry weather flows.
  - b. As possible, attempt to determine the type of flow and try to trace the flow to its source by following storm drain maps, inspecting manholes, and making surface observations. Record findings.
  - c. If the responsible party is identified, educate the party on the impacts of his or her

actions, explain the stormwater requirements, and provide BMPs. Initiate follow-up and/or enforcement procedures, if applicable. (Follow-up and enforcement activities are detailed further in Section III below.) Record activities.

2. Each agency will send at least one representative to General Program workshops to obtain additional training and share experiences with other agencies. The I&IDC Subcommittee will annually assess inspector training needs.

## **III. EVALUATING COMPLIANCE OF NON-STORMWATER DISCHARGER**

These performance standards apply to all agencies.

### *Follow-up Activities*

1. Each agency will continue inspection and follow-up activities until compliance is achieved. Record activities.
2. Agency staff will meet with the responsible party to discuss methods for eliminating the illicit discharge, including disposal options, recycling and possible discharge to the sanitary sewer, as appropriate. Provide ACCWP information to the responsible party. In the case of washwaters, refer to the incremental BMPs in *Recommended Discharge Elimination/Disposal Priorities for Washwaters* (September, 1994).

3. If the discharge is traced to a business, inspectors will coordinate information on the illicit discharge with the industrial/commercial discharge control program.
4. The appropriate agency will begin enforcement procedures, if necessary.

### *Enforcement*

1. Agencies will conduct enforcement activities and report these activities as outlined in the *Protocol for Reporting Enforcement Activities (Protocols)*. These activities are set forth by the individual municipality ordinances.
2. Agencies will provide inspectors with sufficient authority to initiate enforcement procedures.

## IV. SPILL REPORTS/COMPLAINTS

These performance standards apply to all agencies.

Since a network of spill response and clean up programs already exists, establishing a new and separate stormwater response program would duplicate many of the services already being provided by these programs. The approach of the ACCWP illicit discharge control component is to supplement these services and respond to spill incidents that are not under the purview of previously existing clean-up programs. Within this context, each agency will implement the following performance standards.

1. Inspectors will investigate spill reports and/or complaints within their jurisdiction and record their activities.
2. Inspectors will become familiar with the existing spill response and clean-up programs that cover the agency's jurisdiction, and coordinate illicit discharge program activities with these existing programs.
3. Through internal communication and public education, agencies will encourage the use of "911" to report large or hazardous spills. If the use of "911" is not appropriate in a particular agency, establish and publicize an alternative telephone number for reporting spills.



- |                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>4. Each agency will establish a mechanism for obtaining information about spill incidents so that source identification and follow-up actions can be conducted.</p> <p>5. Each agency will identify an appropriate role for its participation in spill response drills, in cooperation with other agencies or industries.</p> | <p>staff review. This data does not need to be included in the ACCWP's annual reports to the Regional Board.</p> <p>4. Each agency will describe training and coordination of staff involved with illicit discharges. This information will be incorporated into the ACCWP's annual reports to the Regional Board.</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## **V. DOCUMENTATION AND REPORTING**

These performance standards apply to all agencies.

1. Each agency will summarize field investigations and follow-up activities using the Illicit Discharge Inspection Quarterly Summary Report form. These forms will be incorporated into the ACCWP's annual reports to the Regional Board.
2. Each agency will document the number and types of spill incidents reported and responded to within the agency's jurisdiction, based on direct calls, "911" dispatch records, referrals from the General Program, and other sources. (Agencies do not need to document automotive fluid spills for traffic accidents.) This information will be incorporated into the ACCWP's annual reports to the Regional Board.
3. Location of field investigations and incidents responded to must be tracked and recorded internally and be available for Regional Board

## **INDUSTRIAL AND COMMERCIAL DISCHARGE CONTROLS**

### **I. INDUSTRIAL AND COMMERCIAL BUSINESS INSPECTION PROGRAM**

These performance standards apply to all municipalities.

1. Each municipality will prepare a written five-year Inspection Plan that describes industrial and commercial sectors, as well as business inspection procedures and priorities. The five-year Inspection Plan will be submitted to the Regional Board by May 30, 2003.

2. Each municipality will prepare annually a written Inspection Workplan that outlines specific steps the municipality will take to conduct effective inspections in the following year. The Inspection Workplan will include:

- a. An evaluation of inspection results from the previous year to assess which industry types had the most impact on stormwater quality.
- b. An estimate of the number of facilities to be inspected in the coming fiscal year listed by type of business. If a business is being inspected due to geographical location, then it will be listed by geographical sector.

- c. An estimate of the number of high priority facilities that will be inspected in the coming fiscal year. The goal is to inspect the business community that has the potential to impact stormwater quality, at least once during the five-year permit period.

- d. As appropriate, a summary of efforts to coordinate inter/intra-agency issues.

The Inspection Workplan for the coming fiscal year will be submitted to the Regional Board by March 1 of each year, except the FY 2003/4 workplan which will be submitted by May 30, 2003.

3. Each municipality will ensure facility inspectors are adequately trained. This includes the knowledge and skills necessary to conduct effective stormwater inspections, with direction from the Industrial & Illicit Discharge Control (I&IDC) Subcommittee. This may include: stormwater regulations and requirements (including the municipality's ordinance, municipal stormwater permit, and the industrial stormwater general permit); the impacts of non-stormwater discharges to the storm drains; inspection techniques and procedures; follow-up and enforcement procedures; and stormwater BMPs.

4. Each municipality will conduct outreach in addition to inspection activities, to inform facility representatives about appropriate stormwater BMP information. This may be satisfied by responding to telephone calls from business representatives, making presentations to business groups, or participating in focused outreach efforts coordinated by the I&IDC Subcommittee for targeted business groups.
5. Municipalities may coordinate outreach information with other ACCWP Subcommittees and other inspection programs.

## **II. INSPECTION ACTIVITIES**

These performance standards apply to all agencies.

1. Each agency will respond to complaints or referrals concerning a facility. The response may include actions such as: interviewing the caller concerning the specific nature of the discharge; inspecting the site; locating any non-stormwater discharges to the storm drains; informing the facility representative of appropriate stormwater BMPs; and conducting follow-up measures to ensure compliance is achieved.
2. Each municipality will update their list of businesses from the following as appropriate: inter/intra-agency referrals; other agency and department lists; business licenses; water/utility bills; etc.

### *Preparing for the Site Visit*

Inspectors will review existing information on the site and its regulatory history.

### *During the Site Visit*

1. Inspectors will review the facility layout to locate the storm drain system and/or stormwater drainage path for storage areas, process areas, vehicle and heavy equipment wash and maintenance areas, and stormwater sampling locations, if applicable.
2. Inspectors will review/inspect the following areas for the potential to discharge pollutants from non-stormwater discharges or exposure to runoff. The areas that are inspected will depend on facility operations.
  - a. Outdoor process/manufacturing areas;
  - b. Outdoor material storage areas;
  - c. Outdoor waste storage and disposal areas;
  - d. Outdoor vehicle and heavy equipment storage and maintenance areas;
  - e. Outdoor parking areas and

- access roads;
  - f. Equipment on rooftops;
  - g. Outdoor wash areas;
  - h. Outdoor drainage from indoor areas; and
  - i. Stormwater conveyance system maintenance, and emergency response practices.
3. Inspectors will collect the information on the most recently adopted Standard Stormwater Facility Inspection Report Form.
  4. Inspectors will use the facility's SWPPP, if available, as a tool in assessing the facility's stormwater pollution control activities. This will not imply review or approval of the adequacy of the SWPPP.
  5. Inspectors will identify and inform the facility representative about problems and violation(s), if applicable. A schedule for correcting problems identified during the inspection and a means for verifying its implementation will be coordinated between the inspector and the facility representative. This information will also be noted on the inspection form.
  6. Inspectors will provide facility representatives with appropriate BMP information, education materials, and inter/intra-agency referrals as appropriate.
  7. Inspectors will obtain ongoing training to support inspection

activities and to continue to improve program implementation.

Inspector(s) representing each municipality will attend General Program inspector training workshops. The Industrial & Illicit Discharge Control Subcommittee will annually assess inspector training needs.

### III. FACILITY COMPLIANCE EVALUATION

These performance standards apply to all agencies.

#### *Repeat/Follow-up Inspection*

1. The inspector will determine if the facility is in compliance with the municipality's stormwater ordinance (i.e., there are no unpermitted non-stormwater discharges and pollutant exposure to rain is minimized).
2. Inspectors will prioritize the facility for re-inspection. If a problem was identified during the inspection, inspectors will perform a follow-up inspection or initiate a self-certification process where the facility representative certifies in writing that the problem has been removed or corrected within the time specified by the inspector.
3. Inspectors will begin enforcement procedures as appropriate.

#### *Enforcement*

4. Agencies will conduct enforcement activities and report these activities as outlined in the *Protocol for Reporting Enforcement Activities*

adopted by the Industrial & Illicit Discharge Control Subcommittee and the Management Committee. These activities are set forth by the individual agency ordinances.

#### **IV. DOCUMENTATION AND REPORTING**

These performance standards apply to all agencies.

Each municipality will annually review inspection results and assess whether goals were met. The General Program will

summarize inspection activity, follow-up activities, and enforcement action taken against businesses determined to be in non-compliance. This review will be incorporated into the Program's *Annual Report* to the Regional Board.

#### **Notes**

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<sup>1</sup> Implement when State Board adopts a Construction Activity Stormwater NPDES General Permit for construction activities  $\geq 1$  acres.

<sup>2</sup> For projects that require a NOI, the SWPPP is equivalent to a Stormwater Quality Protection Plan.

<sup>3</sup> Approach and schedule to be submitted with the second *Annual Report* after permit adoption.



## REFERENCES

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### SECTION 2

Hansen, S.R., *Identity and Control of Toxicity in Storm Water Discharges to Urban Creeks*. 1995, S.R. Hansen and Associates: Concord, CA.

*Results of the 1999 Public Attitude and Awareness Survey Regarding Storm Water Pollution*. 1999, Jenkinson Associates: Sacramento, CA.

Scanlin, J. and Feng, A, *Characterization of the Presence and Sources of Diazinon in the Castro Valley Creek Watershed*. 1997, Alameda Countywide Clean Water Program: Hayward, CA.

USEPA Memorandum, *Water Resources Assessment for Diazinon*. May 10, 1999, Office of Prevention, Pesticides and Toxic Substances, U.S. Environmental Protection Agency: Washington, D.C.

### SECTION 4

Abu-Saba, Khalil and Lila Tang. 2000. *Watershed Management of Mercury in the San Francisco Bay Estuary: Total Maximum Daily Load*. Report to the U.S. EPA. California Regional Water Quality Control Board, San Francisco Bay Region. Oakland, CA.

ACCWP. Results of a study in progress on the fate and transport of diazinon applied to urban sites. Principal authors: Feng and Scanlin. Report available in October 2001.

Barron, Thomas. 2000. *Architectural Uses of Copper: An Evaluation of Stormwater Pollution Loads and BMPs*. Prepared for the Palo Alto Regional Water Quality Control Plant. Palo Alto, CA.

Balogh, J.C. and Walker. 1992. *Golf course management and construction-environmental issues*. Lewis Publishers. Ann Arbor, MI.

Davis, J.A., M. May, S.E. Wainwright, R. Fairey, C. Roberts, G. Ichikawa, R. Tjeerdema, M. Stoelting, J. Becker, M. Petreas, and K. Taberski. 1999. *Persistent Toxic Chemicals of Human Health Concern in Fish from San Francisco Bay and the Sacramento River, CA*. Presented at 4th Biennial State of the Estuary Conference, San Francisco, CA.

EIP Associates. 1997. *Polychlorinated Biphenyls (PCBs) Source Identification*. Prepared for the Palo Alto Regional Water Quality Control Plant. San Francisco, CA.

EIP Associates. 1997. *Mercury Source Identification*. Prepared for the Palo Alto

Regional Water Quality Control Plant. San Francisco, CA.

Hetzel, Frederic. 2000. *Polychlorinated Biphenyls in San Francisco Bay: Sources and Loadings Progress Report*. California Water Quality Control Board, San Francisco Bay Region. Oakland, CA.

Katznelson, R. and Mumley, T.E. 1997. *Diazinon in Surface Waters in the San Francisco Bay Area: Occurrence and Potential Impact*. Report prepared for the Alameda Countywide Clean Water Program, Hayward, CA. Submitted to the California State Water Resources Control Board, Oakland, CA, June 30, 1997.

National Research Council. 2000. Toxicological Effects of Methylmercury. Prepublication copy.

Regional Water Quality Control Plant (1997). *Facts about Brake Pads and Pollution Prevention*. Palo Alto, CA.

Scanlin, J. and Cooper, A. 1997. *Outdoor Use of Diazinon and Other Insecticides in Alameda County*. Report prepared for the Alameda County Flood Control and Water Conservation District, Hayward, CA. Final Draft, June 1997.

Scanlin, J and Feng, A. 1997. *Characterization of the Presence and Sources of Diazinon in the Castro Valley Creek Watershed*. Report prepared for the Alameda County Flood Control and Water Conservation District, Hayward, CA. Submitted to the California State Water Resources Control Board, Oakland, CA, June 30, 1997.

## **SECTION 5**

Approach and schedule to be submitted with the second *Annual Report* after permit adoption.

Implement when State Board adopts a Construction Activity Stormwater NPDES General Permit for construction activities  $\geq 1$  acres.

For projects that require a NOI, the SWPPP is equivalent to a Stormwater Quality Protection Plan.



## ***Appendix A: Memorandum of Agreement***

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**AGREEMENT**  
**TO IMPLEMENT THE ALAMEDA COUNTY**  
**URBAN RUNOFF CLEAN WATER PROGRAM**

(Including First and Second Amendments)

## AGREEMENT

### PROVIDING FOR IMPLEMENTATION OF THE ALAMEDA COUNTY URBAN RUNOFF CLEAN WATER PROGRAM

THIS AGREEMENT is made and entered into this     day of     , 1991 by and between the following undersigned public agencies, all which are referred to collectively as the Parties.

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, a public agency of the State of California;  
Zone 7 of ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT, a local public agency of the State of California;  
COUNTY OF ALAMEDA, a subdivision of the State of California;  
CITY OF ALAMEDA, a municipal corporation of the State of California;  
CITY OF ALBANY, a municipal corporation of the State of California;  
CITY OF BERKELEY, a municipal corporation of the State of California;  
CITY OF DUBLIN, a municipal corporation of the State of California;  
CITY OF EMERYVILLE, a municipal corporation of the State of California;  
CITY OF FREMONT, a municipal corporation of the State of California;  
CITY OF HAYWARD, a municipal corporation of the State of California;  
CITY OF LIVERMORE, a municipal corporation of the State of California;  
CITY OF NEWARK, a municipal corporation of the State of California;  
CITY OF OAKLAND, a municipal corporation of the State of California;  
CITY OF PIEDMONT, a municipal corporation of the State of California;  
CITY OF PLEASANTON, a municipal corporation of the State of California;

CITY OF SAN LEANDRO, a municipal corporation of the State of California;  
and CITY OF UNION CITY, a municipal corporation of the State of California.

## RECITALS

A. The 1986 Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan), adopted by the Regional Water Quality Control Board in implementation of the Federal Clean Water Act, requires that the PARTIES develop a Program to control the discharge of pollutants from urban runoff.

B. In furtherance of their responsibilities pursuant to the Basin Plan, the PARTIES, have previously entered into a series of agreements to jointly fund the cost of preparing an action plan to evaluate nonpoint source pollutants, monitor identified pollutants and develop control measures to mitigate or reduce nonpoint sources of pollutants. Collectively, the measures undertaken pursuant to the previous agreements and anticipated to continue pursuant to this Agreement, are known as the Alameda County Urban Runoff Clean Water Program (hereinafter “Program”). The Program contains certain elements which provide a general benefit to the parties (such as monitoring, public education, program administration, etc.) and these elements of joint responsibility among the parties are termed the “General Program”. In addition, the Program contains other elements which are an individual Party responsibility and which provide individual benefits (such as construction site controls, catch basin cleaning, and illicit and illegal connection

inspections, monitoring and enforcement), and these elements are termed the “Individual Programs”. A description of the General and Individual Programs’ elements, major tasks, schedules, and budgets will be developed as part of the “Work Plan for Cities in Alameda County, Alameda County, and the Alameda County Flood Control and Water Conservation District to file for a NPDES Permit” dated August 24, 1990.

C. The previous Agreements that have been executed are the following: The November 10, 1987 “Agreement Regarding Evaluation of the Non-Point Source of Water Pollution” and the October 17, 1989 “Agreement Regarding Implementation of Nonpoint Source Control Evaluation Program”. In addition there is a pending agreement titled “Agreement Regarding Development of a Proposed Alameda County Nonpoint Source Control Management Plan” which will provide funding through June 1991 for implementation of the August 24, 1990 work plan.

D. The PARTIES desire to continue the Program and to enter into this Agreement for the purpose of ensuring continued participation, in terms of cost and administrative responsibilities.

E. This Agreement does not amend or supersede any prior agreement among the PARTIES regarding the Program, but is to be read as in accord with and

implementation thereof.

F. The Alameda County Flood Control and Water Conservation District (District) is a local public agency of the State of California duly organized and existing and empowered to conserve water and to provide maintenance and flood control management of the water courses and has the authority to control the discharge of surface waters to its facilities. The County of Alameda and all of the cities therein are subdivisions of the State with authority to control the discharge of surface waters from their respective jurisdictions.

NOW, THEREFORE, THE PARTIES AGREE AS FOLLOWS:

1. A Management Committee is hereby created to provide overall program direction, review and recommend an annual budget for approval by the PARTIES, and budget oversight, all in accordance with the Alameda County Urban Runoff Clean Water Program. Management Committee members, and their alternates, shall be appointed by the City Manager or the equivalent of the respective Parties and a confirming letter sent to the authorized representative of the District. The Management Committee shall adopt bylaws for its governance.

- (a) Each Party to this agreement is allocated the number (or fraction thereof) of votes shown in Exhibit A. This allocation of voting strength is based on the formulas stated in Exhibit B to the Agreement.
- (b) A quorum for the conduct of business by the Management Committee shall be a majority of the voting Parties to the Agreement. The voting strength allocated to a Party shall not be considered in the determination of a quorum.
- (c) Approval of actions by the Management Committee shall require a two-thirds affirmative vote of all allocated votes as shown in Exhibit A.

No action shall be taken by the District which requires expenditures by any party other than the District without prior Management Committee approval.

2. Pursuant to direction of the Management Committee, the District shall administer and coordinate the Program, which duties include but are not limited to:

- (a) Reapplying on behalf of the PARTIES to become co-applicants for a National Pollutant Discharge Elimination System (NPDES) permit;
- (b) Preparing draft annual budget and, periodic status reports on Program activities and expenditure and distributing same to PARTIES at least annually;
- (c) Consolidating and submitting reports prepared by the several PARTIES required by the NPDES permit;
- (d) Letting and administering approved consultant contracts according to District policies and procedures and considering other members' requirements. All consultant contracts will contain hold harmless and indemnity provisions and insurance requirements for the benefit of all PARTIES;
- (e) Conducting audits of consultant contracts in accordance with District policies and procedures;
- (f) Maintaining knowledge of and advising the PARTIES regarding current and proposed state and federal policies, regulations and programs that impact nonpoint source pollutant control programs; assisting the PARTIES in development and presentation of positions on these issues before local, State, and Federal agencies;
- (g) Preparing an annual report on the implementation of the Program;
- (h) Representing the PARTIES in participation in the Bay Area Stormwater Management Agencies Association; and

- (i) Formally advising the appropriate State and Federal agencies of termination or amendment of this Agreement.

3. The PARTIES accept and agree to perform the following duties:

- (a) Each will authorize a representative to reapply for an NPDES permit as co-applicants with the other Parties;
- (b) Each will fully comply with the NPDES permit conditions applicable to its Individual Program and its identified portion of the General Program;
- (c) Each will select a representative and an alternate to participate in Management Committee meetings and other required meetings of the PARTIES;
- (d) Each will fund and implement its own Individual Program, and will fund and implement its share of the General Program. The District intends to provide funding to support new and expanded activities required by the General and Individual Programs for Cities located in District zones with Benefit Assessment Programs. Such funding will be provided to the extent that it is available and with the concurrence of the applicable City if it results in deferring flood control projects.
- (e) Each will provide agreed upon reports (certified under penalty of perjury) to the District on compliance with applicable provisions of the NPDES permit and program implementation.

4. A proper accounting of funds and reports of all receipts and disbursements shall be made, including funds disbursed to individual parties for implementation of permit programs. Upon completion of the purposes of this Agreement, any surplus money on hand shall be returned in proportion to the



contributions made. In the event a Party terminates this Agreement, any unexpended portion of its share of cost funds shall be returned to it.

5. By agreement of the PARTIES, budget allocations and voting shares for the General Program shall be made according to a formula which for the municipalities allocates proportional shares based on a 50 percent weight given to the area and a 50 percent weight given to the population within each municipalities' jurisdiction (excluding open water and wetland areas of San Francisco Bay). The attached Exhibit B provides a copy of the formulas which are used to allocate costs. Each Parties' share of the General Program's costs for fiscal year 1991/92 will be according to the percentages provided in Exhibit A. Cost shares will be recalculated based on updated information on population and area using the formulas in Exhibit B for fiscal year 1992/93 and at appropriate future intervals as specified in the bylaws. The budget allocation for the Individual Programs shall be made directly by the individual responsible parties.

6. This Agreement shall have a term of six (6) years from the first day of April 1991, subject to automatic renewal for a five (5) year period in the absence of objection thereto made in writing by any Party 90 days in advance of the renewal date. This Agreement shall have an additional term of six (6) years from the first day of April 2002, subject to an additional automatic renewal for a five (5) year period in the absence of objection thereto made in writing by any Party 180 days in advance of the renewal date. The participation of any Party to this Agreement may be terminated by a two-thirds affirmative vote of all allocated votes in any year in which the funds necessary for its continued involvement are not appropriated by its legislative body.

7. The PARTIES shall retain the ability to individually (or collectively) request permit modifications and initiate permit appeals for permit provisions to the extent that a provision affects an individual party or group of PARTIES.

8. This agreement may be amended from time to time by written agreement of the Parties' governing bodies representing two-thirds or more of all allocated votes as shown in Exhibit A.

9. Participation in this Agreement may be terminated by any Party for any reason after the Party complies with all of the conditions of termination. The conditions of termination include the following: the Party shall notify all of the other Parties to the Agreement 90 days prior to its termination in the Agreement, the Party shall obtain its own NPDES permit for urban runoff, and the Party shall have its name deleted as a co-permittee of the Parties' NPDES permit. Any expenses associated with terminating the Agreement including but not limited to filing for and obtaining the individual NPDES permit and the amendment of the Parties' NPDES permit will be solely the responsibility of the Party terminating its participation in the Agreement.

10. It is understood and agreed that, pursuant to Government Code 895.4, each Party ("indemnitor") shall, to the extent permitted by law, defend, indemnify and save harmless each other Party, and its officers and employees from all claims, suits or actions of every name, kind and description resulting from indemnitor's performance of this Agreement, excluding any injuries, death, damage or liability resulting from the negligence or willful misconduct of the other Parties or their officers or employees.

## ***Appendix B: General Program Tasks and Budget for FY 2001/02***

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<b>Program Component</b>	<b>FY 2001/02 Budget</b>
Planning and Regulatory Compliance	\$519,000

Alameda Countywide Clean Water Program

**FY 2001/02 General Program Budget Summary**

Watershed Assessment	\$151,000
Monitoring and Special Studies	\$448,000
Public Information/Participation	\$555,000
Municipal Maintenance Activities	\$88,000
New Development and Construction Site Controls	\$82,000
Illicit Discharge Controls	\$46,000
Industrial and Commercial Discharge Controls	\$124,000
Contingency	\$87,000
<b>BUDGET TOTAL</b>	<b>\$2,100,000</b>

# Alameda Countywide Clean Water Program

## Planning and Regulatory Compliance General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
<b>PRC-1. Participate in the Regulatory Process:</b> <ul style="list-style-type: none"> <li>Review and comment on legislation and regulation affecting stormwater management. Confer with Regional board on permit reissuance. (Includes all legal assistance to the Program.)</li> <li>Represent Program in TMDL and permit processes and on BASMAA and California Stormwater Quality Task Force.</li> </ul>	<p>Previously funded under Task 2.3 (Respond to Regulatory Initiatives).</p> <p>Previously part of Task 2.2 (Lead and Represent).</p>	<p>\$99,000</p> <p>(\$59,000)</p> <p>(\$40,000)</p>	<p>Ongoing</p> <p>Ongoing</p>
<b>PRC-2. Assist with Permit Compliance:</b> <ul style="list-style-type: none"> <li>Develop deliverable forms. Compile and submit required reports to Regional Board.</li> <li>Review member agencies' performance and provide additional assistance with permit compliance.</li> </ul>	<p>Previously funded under Task 2.1 (Assist with Compliance).</p> <p>Previously funded under Task 2.4 (Continuous Improvement).</p>	<p>\$87,000</p> <p>(\$52,000)</p> <p>(\$35,000)</p>	<p>Ongoing</p>
<b>PRC 3 &amp; 4. Develop Partnerships and Facilitate Watershed Approach:</b> <ul style="list-style-type: none"> <li>The purpose of this task is to expand upon existing partnerships and to pursue opportunities to create additional partnerships.</li> <li>The purpose of this task is to coordinate the Program's involvement in watershed management activities.</li> </ul>	<p>Previously part of Task 2.2 (Lead and Represent).</p> <p>Funding transferred from Watershed Assessment component.</p>	<p>\$40,000</p> <p>(\$15,000)</p> <p>(\$25,000)</p>	<p>Ongoing</p>
<b>PRC 5. Control Measure Plans:</b> <ul style="list-style-type: none"> <li>Implement the planning component tasks of the Control Measure Plans and coordinate the implementation and updating of Control Measure Plans</li> </ul>	<p>\$22,000 from Task 2.2 (Lead and Represent); \$28,000 in additional funding.</p>	<p>\$50,000</p>	<p>Ongoing</p>
<b>PRC 6. Planning and Evaluation:</b> <ul style="list-style-type: none"> <li>Program planning, coordination and evaluation.</li> <li>Newsletter and website.</li> </ul>	<p>Previously funded under Task 2.5.1.</p> <p>Previously funded under Task 2.6 (Website and Newsletter).</p>	<p>\$57,000</p> <p>(\$20,000)</p> <p>(\$37,000)</p>	<p>Ongoing</p>
<b>PRC 7. Management Services</b> <ul style="list-style-type: none"> <li>Program management, budgeting, contracting, accounting, and reporting.</li> <li>Facilitate Management and Policy Level Subcommittee meetings and project management.</li> </ul>	<p>Previously funded under Task 2.5.2 (Management Services)</p> <p>Previously funded under Task 2.5.1</p>	<p>\$101,000</p> <p>(\$61,000)</p> <p>(40,000)</p>	<p>Ongoing</p>
<b>PRC 8. Fees and Dues:</b>		<p>\$85,000</p>	

Alameda Countywide Clean Water Program

**Planning and Regulatory Compliance General Program Work Plan and Budget - FY 2001/02**

<b>Task Number and Description</b>	<b>Rationale/Background (if necessary)</b>	<b>Budget</b>	<b>Schedule/ Due Date</b>
<ul style="list-style-type: none"><li>• Annual NPDES Permit Fee.</li><li>• BASMAA and California SWQTF contributions</li></ul>		(\$10,000) (\$75,000)	
<b>Total Budget</b>		\$519,000	

Alameda Countywide Clean Water Program

**Watershed Assessment General Program Work Plan and Budget - FY 2001/02**

<b>Task Number and Description</b>	<b>Rationale/Background (if necessary)</b>	<b>Budget</b>	<b>Schedule/ Due Date</b>
<b>WA-1. Develop and maintain a GIS resource for watershed information:</b> <ul style="list-style-type: none"> <li>Continue mapping of pilot watersheds, and fill high-priority data needs such as digital conversion of available data or maps. Priorities and map projects to be developed in consultation with the local co-permittees or other watershed partners, and in coordination with other regional efforts.</li> <li>Develop framework for long-term inventory of other Alameda County watersheds. Identify needs and priorities for incorporating data.</li> </ul>	<p>These tasks are all based on the Draft SWQMP, and support Objective #1 of the BASMAA Regional Monitoring Strategy.</p>	<p>\$55,000 (\$45,000)</p> <p>(\$10,000)</p>	<p>Ongoing</p> <p>Target completion January 2002</p>
<b>WA-2. Use a variety of indicators to assess the condition of streams and watersheds:</b> <ul style="list-style-type: none"> <li>Coordinate development of creek indicators (macroinvertebrate community, flow or imperviousness) with the proposed Stream Protection Policy and other regional initiatives.</li> <li>Provide resources and training to citizen monitoring groups that are working with local watershed partners. May use services for training and technical assistance provided by Watershed Assessment Resource Center or other regional information sources.</li> </ul>		<p>\$30,000</p> <p>(\$15,000)</p> <p>(\$15,000)</p>	<p>Ongoing</p>
<b>WA-3. Provide useful watershed information to the Program and other watershed stakeholders:</b> <ul style="list-style-type: none"> <li>Continue testing and application of selected indicators for contact recreation and human health risk (e.g. microbiological, chemical); provide tools and guidance to co-permittees and other local managers.</li> <li>Conduct local pilot projects or assist member agencies in conducting watershed inventory and planning.</li> <li>Prepare watershed maps and other creek information for display on ACCWP website.</li> </ul>		<p>\$56,000</p> <p>(\$16,000)</p> <p>(\$30,000)</p> <p>(\$10,000)</p>	<p>Ongoing</p>
<b>WA-4. Reporting and component management:</b> <ul style="list-style-type: none"> <li>Develop budgets, manage projects, compile reports, and evaluate component activities.</li> </ul>		<p>\$10,000</p>	<p>Ongoing</p>
<b>Total Budget</b>		<b>\$151,000</b>	

Alameda Countywide Clean Water Program

Monitoring and Special Studies General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
<b>MS-1. Characterize and track pollutants of concern in urban runoff:</b> <ul style="list-style-type: none"> <li>Required contribution to Regional Monitoring Program for Trace Substances.</li> <li>Continue sediment sampling for Mercury, PCB and organochlorine pesticides, and investigate potential sources in high priority watersheds as requested by Regional Board staff to support TMDL development.</li> <li>Review past Program fixed-station sampling data and develop statistically sound design for long-term monitoring plan to track metals, pesticides and toxicity.</li> <li>Conduct stormwater monitoring in accordance with long-term plan.</li> <li>Refine database of past sampling data; incorporate additional data types and develop queries or other user interfaces to facilitate analysis of long-term trends.</li> </ul>	<p>These tasks are based on the Draft SWQMP, and support Objective #2 of the BASMAA Regional Monitoring Strategy.</p> <p>An anticipated increase in the annual RMP fee has been estimated at 10% for calendar year 2002.</p> <p>One-time allocation for review of past data and preparation of long-term plan, to be updated after several years of sampling.</p>	<p>\$267,000</p> <p>(\$147,000)</p> <p>(\$50,000)</p> <p>(\$30,000)</p> <p>(\$15,000)</p> <p>(\$25,000)</p>	Ongoing
<b>MS-2. Evaluate the effectiveness of urban runoff BMPs:</b> <ul style="list-style-type: none"> <li>Conduct special studies focusing on TMDL priority pollutants and their sources. These studies may include: planning of data collection for future TMDLs; local source identification; identification or refinement of specific control measures.</li> <li>Conduct studies to assist establishment of local design standards for treatment and retention of runoff from new developments and redevelopment areas, similar to the SUSWMP requirements being discussed in relation to Santa Clara's NPDES permit renewal.</li> </ul>	<p>These tasks are based on the Draft SWQMP, and support Objective #3 of the BASMAA Regional Monitoring Strategy.</p> <p>ACCWP's next NPDES permit is likely to include similar requirements, pursuant to recent "Bellflower" decision.</p>	<p>\$75,000</p> <p>(\$35,000)</p> <p>(\$40,000)</p>	Ongoing
<b>MS-3. Provide technical information on management issues involving urban runoff:</b> <ul style="list-style-type: none"> <li>Conduct special studies to address data gaps or management issues concerning pollutants of concern and urban runoff impacts.</li> <li>Provide miscellaneous technical on-call support as needed.</li> </ul>	<p>These tasks support stormwater management and pollution prevention by co-permittees</p>	<p>\$37,000</p> <p>(\$27,000)</p> <p>(\$10,000)</p>	Ongoing



Alameda Countywide Clean Water Program

**Monitoring and Special Studies General Program Work Plan and Budget - FY 2001/02**

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
<b>MS-4. Coordinate with RMP and BASMAA:</b> <ul style="list-style-type: none"> <li>Participate in BASMAA Monitoring Committee, RMP technical review, other regional stakeholder discussions.</li> </ul>		\$24,000	Ongoing
<b>MS-5. Reporting and component management:</b> <ul style="list-style-type: none"> <li>Facilitate and support Watershed Assessment and Monitoring Subcommittee.</li> <li>Develop component budgets, track expenditures, conduct special studies needs assessment, evaluate component activities and manage component tasks.</li> </ul>		\$45,000 (\$20,000) (\$25,000)	Ongoing
<b>Total Budget</b>		\$448,000	

Alameda Countywide Clean Water Program

Public Information/Participation General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
<b>P/P 1. Implement targeted outreach:</b> <ul style="list-style-type: none"> <li>Targeted campaigns will focus on helping to implement the control measure plans for specific water quality impairing pollutants. The pollutants that appear to be priorities on the Regional Board's list include mercury, PCBs and dioxin compounds, and pesticides. The campaigns will focus primarily on targeting residential usage and encouraging residents to prevent pollution.</li> </ul>	Regional Advertising Campaign Local Placement of Advertising Collaboration with BASMAA and others	\$205,000  (\$100,000) (\$95,000) (\$10,000)	Ongoing
<b>P/P 2. Continue to reinforce storm water messages:</b> <ul style="list-style-type: none"> <li>This task supports reinforcing general and specific storm water messages.</li> </ul>	IPM partnership Media Relations Outreach Events	\$41,000 (\$21,000) (\$10,000) (\$10,000)	Ongoing
<b>P/P 3. Support educational and watershed-based approaches:</b> <ul style="list-style-type: none"> <li>This task will provide support for programs that educate students about stormwater pollution (for example, Bay Savers, Kids in Creeks, or Estuary Action Challenge), the Community Stewardship Grants program, and outreach events such as the <i>Watershed Symposium</i>.</li> </ul>	Bay Savers Aquatic Outreach Institute Estuary Action Community Stewardship Symposium BAEER Fair	\$170,000 (\$56,000) (\$70,000) (\$15,000) (\$17,500) (\$10,000) (\$2,500)	Ongoing
<b>P/P 4. Support municipalities:</b> <ul style="list-style-type: none"> <li>This task includes: developing and obtaining promotional materials for use by the municipalities; updating, reprinting, and distributing existing ACCWP materials; and, responding to requests for information from the public and member agencies.</li> </ul>	Materials Support	\$74,000  (\$50,000) (\$24,000)	Ongoing
<b>P/P 5. Component management and evaluation:</b> <ul style="list-style-type: none"> <li>This task includes: subcommittee support, component evaluation, task management, and the development of work plans and budgets.</li> </ul>	Subcommittee Support \$20,000 Component Evaluation \$7,000 Component Management \$40,000	\$67,000 (\$20,000) (\$7,000) (\$40,000)	Ongoing
<b>Total Budget</b>		\$555,000	

# Alameda Countywide Clean Water Program

## Municipal Maintenance Activities General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
<b>MN-1. Implement and Assist with Performance Standards:</b> <ul style="list-style-type: none"> <li>Each agency will implement the performance standards for municipal maintenance activities. The performance standards include the following major activities: <ul style="list-style-type: none"> <li>Street Sweeping</li> <li>Storm Drain Cleaning</li> <li>Conducting Training</li> <li>Reporting</li> </ul> The General Program will work through the Maintenance Subcommittee to resolve implementation and consistency issues. </li> </ul>	Performance standards are the primary method for implementing the SWMP and complying with requirements of the NPDES permit.	\$15,000	Ongoing
<b>MN-2. Coordinating Maintenance-Related Activities with Other Subcommittees of the ACCWP, Other Agencies and Private Industries:</b> <ul style="list-style-type: none"> <li>The subcommittee will work with appropriate staff from other Subcommittees of the ACCWP, park and recreation departments, and other public agencies and private industries whose activities are similar to or potentially affect municipal maintenance activities to identify activities of concern. Examples of other public agencies and private industries include PG&amp;E, water suppliers and utilities, garbage collection companies, the Port of Oakland, golf courses, private recreational facilities and animal confinement areas. private recreational facilities and construction contractors.</li> </ul>	Coordination among agencies and industries whose activities affect municipal maintenance will result in greater efficiency and effectiveness in meeting this component's goals.	\$15,000	Ongoing
<b>MN-3. Optimize Data Management and Analysis:</b> <ul style="list-style-type: none"> <li>The General Program will optimize ongoing collection, recording and analysis of maintenance data. This will include continuing to evaluate if the types of maintenance data being collected are useful and if other types of data should be collected. Examples of potential studies and data analysis include the following: <ul style="list-style-type: none"> <li>Leaf collection programs</li> <li>Litter abatement programs.</li> </ul> </li> </ul>	This task is based on the SWMP.	\$15,000	Ongoing
<b>MN-4. Outreach and Training:</b> <ul style="list-style-type: none"> <li>The General Program will facilitate outreach and training activities aimed at preventing discharges from maintenance activities, with direction from the Maintenance Subcommittee. This includes selecting the appropriate forum (e.g., workshops, round table meetings, work groups, inter/intra-agency coordination meetings, etc.) depending on the target audiences (e.g., ACCWP agencies, other agencies, property owners, residence, etc.).</li> <li>The Maintenance Subcommittee will also coordinate outreach activities with</li> </ul>	Outreach activities will educate maintenance staff and the public about the ACCWP's goals related to municipal maintenance and provide information on how the public can help the municipalities achieve these goals.	\$33,000	Ongoing

Alameda Countywide Clean Water Program

**Municipal Maintenance Activities General Program Work Plan and Budget - FY 2001/02**

Task Number and Description	Rationale/Background (if necessary)	Budget	Schedule/ Due Date
other ACCWP Subcommittees when the objectives of a planned outreach and training activity conducted by the Maintenance Subcommittee overlap with the objectives of another Subcommittee.			
<b>MN-5. Manage Component and Evaluate and Improve Its Effectiveness:</b> <ul style="list-style-type: none"> <li>The General Program will assist the Maintenance Subcommittee and its workgroups to conduct meetings and prepare any needed NPDES permit reports and work plans related to this component. This includes assisting with the development of annual General Program budgets. The following activities are examples of how the effectiveness of this component may be evaluated: <ul style="list-style-type: none"> <li>Survey member public agencies to obtain information about how well this component and the performance standards are working.</li> <li>Evaluate the information being submitted as part of the annual reports.</li> <li>Evaluate the Regional Board staff's reviews of the Clean Water Program's performance in this area.</li> </ul> </li> </ul>	This task is based on the SWMP.	\$10,000	Ongoing
<b>Total Budget</b>		\$88,000	

Alameda Countywide Clean Water Program

**New Development and Construction Site Controls General Program Work Plan and Budget - FY 2001/02**

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
<b>ND-1. Identify More Specific Stormwater Controls for New Development:</b> <ul style="list-style-type: none"> <li>Identify and work with a stakeholder group to develop a method for integrating pollutant and hydromodification controls. Submit method to Regional Board staff and make changes based on their feedback.</li> <li>Identify assistance needed by ACCWP agencies to implement these controls.</li> </ul>	This task is based on the SWMP and Regional Board interest in more directly specifying how treatment, hydromodification, source and design controls, will be used.	\$18,000	06-30-2002  Ongoing
<b>ND-2. Assist with Implementation of More Specific Stormwater Controls:</b> <ul style="list-style-type: none"> <li>Perform activities identified by New Development Subcommittee as helpful to implementation of the new, more specific controls such as: incorporate the controls into performance standards; develop revised Conditions of Approval and other planning materials; provide information on successful development/redevelopment projects employing the controls and information on cost-effective ways to implement the controls; and assist with implementation of any new development control measures related to a specific pollutant.</li> </ul>	This task is based on the SWMP and municipal planning staff's need to implement treatment, hydromodification, source and design controls.	\$18,000	Ongoing
<b>ND-3. Assist Development and Facilitate Use of Watershed Information:</b> <ul style="list-style-type: none"> <li>Identify watershed information needs related to New Development. Communicate these needs to the Watershed Monitoring and Management Subcommittee.</li> <li>Facilitate municipal planning and engineering staff's use of this information as it becomes available.</li> </ul>	This task is based on the SWMP and the ACCWP's emphasis on watershed management.	\$3,000 (\$1,000)  (\$2,000)	Ongoing
<b>ND-4. Promote Outreach and Training:</b> <ul style="list-style-type: none"> <li>Conduct one outreach and/or training event to a target group (agency staff or building industry) chosen by the New Development Subcommittee.</li> <li>Develop and distribute outreach materials with direction from New Development Subcommittee. Compile and distribute guidance and educational material to agency staff.</li> </ul>	This task is based on the SWMP. The focus of training and outreach materials will be on the specific pollutant and hydromodification controls developed in Task 7.1.	\$18,000 (\$10,000)  (\$8,000)	06-30-2002

Alameda Countywide Clean Water Program

**New Development and Construction Site Controls General Program Work Plan and Budget - FY 2001/02**

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
<b>ND-5. Assist with NPDES Permit Requirements, Reports, and Budgets:</b> <ul style="list-style-type: none"> <li>Provide support for monthly New Development Subcommittee meetings and any needed work group meetings. Prepare reports, budgets, and other items to assist with implementation and documentation of this component. Evaluate effectiveness of this component so that the New Development Subcommittee can make improvements to the General Program.</li> </ul>	This task is based on the SWMP and the ACCWP desire to implement a process of continuous improvement.	\$25,000	Ongoing
<b>Total Budget</b>		\$82,000	

# Alameda Countywide Clean Water Program

## Illicit Discharge Controls General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
<b>ID-1. Implement and Assist with Performance Standards:</b> <ul style="list-style-type: none"> <li>Provide input and direction on the next Stormwater Management Plan and permit application based on comments from the I&amp;IDC Subcommittee.<sup>1</sup> Review component performance standards and update as needed.</li> </ul>	This task is based on the SWMP. Performance standards are reviewed annually, and updated as necessary.	\$1,000	Ongoing  01-01-2002
<b>ID-2. Assist Member Agencies Comply with Requirements for Conditionally Exempt Non-Stormwater Discharges:</b> <ul style="list-style-type: none"> <li>Facilitate compliance with conditionally exempt non-stormwater discharges. Work with the I&amp;IDC Subcommittee to identify effective control measures. Facilitate process for adding new conditionally exempt non-stormwater discharges and developing appropriate BMPs.</li> </ul>	This task is based on the SWMP, the municipal stormwater NPDES permit, and "Table 5. Summary of Conditionally Exempt Discharges, Follow-up, and Schedule" of the ACCWP 1997/98 Annual Report.	\$7,000	09-15-2002
<b>ID-3. Track and Analyze Non-Stormwater Discharge Reports:</b> <ul style="list-style-type: none"> <li>Collect and analyze information on illicit discharge control activities reported in the ACCWP agencies' quarterly summary reports. Analyze information to detect trends and to improve planning and management of illicit discharge control program activities, with direction from the I&amp;IDC Subcommittee.</li> </ul>	This task is based on the SWMP and the municipal stormwater NPDES permit.	\$20,000	03-15-2002 & 09-15-2002
<b>ID-4. Conduct Outreach and Training:</b> <ul style="list-style-type: none"> <li>Facilitate outreach and training activities to prevent illicit discharges, with direction from the I&amp;IDC Subcommittee. Develop materials to support outreach and training activities.</li> <li>Identify a target audience and select appropriate outreach activity at least once every two years.</li> </ul>	This task is based on the SWMP.	\$12,000 (\$2000)  (\$10,000)	07-01-2002
<b>ID-5. Manage Component and Evaluate and Improve Its Effectiveness:</b> <ul style="list-style-type: none"> <li>Assist I&amp;IDC Subcommittee and its workgroups to conduct meetings and prepare NPDES permit reports, work plans and associated budgets related to this component.</li> </ul>	This task is based on the SWMP. All agencies will submit their action plan using the same form to help ensure the information reported is consistent countywide.	\$6,000	12-15-2001 03-15-2002 & 09-15-2002
<b>Total Budget</b>		\$46,000	

<sup>1</sup> The majority of the budget for I&IDC Subcommittee coordination of illicit discharge control consistency issues is included in Task 9.2.

Alameda Countywide Clean Water Program

Industrial and Commercial Discharge Controls General Program Work Plan and Budget - FY 2001/02

Task Number and Description	Rational/Background (if necessary)	Budget	Schedule/ Due Date
<b>ICD-1. Assist with the Implementation of Business Inspections, Enforcement and Educational Outreach Activities:</b> <ul style="list-style-type: none"> <li>Assist Agencies to implement business inspections and related performance standards and encourage Program-wide consistency under the auspices of the Industrial/Commercial &amp; Illicit Discharge Control (I&amp;IDC) Subcommittee and its work groups.</li> <li>Review performance standards and make improvements on a biannual or more frequent basis.</li> </ul>	This task is based on SWMP. <i>Illicit Discharge Control Program coordination is incorporated into this budget.</i>	\$45,000	Ongoing  06-30-2003
<b>ICD-2. Develop BMP Guidance Materials:</b> <ul style="list-style-type: none"> <li>Identify target audiences and which format to use for materials under the direction of the Industrial/Commercial &amp; Illicit Discharge Control Subcommittee. Produce materials.</li> </ul>	This task is based on SWMP. Guidance materials will support both illicit discharge control and industrial/commercial discharge control activities.	18,000	Ongoing
<b>ICD-3. Track and Analyze Facility Inspection Reports:</b> <ul style="list-style-type: none"> <li>Collect and analyze facility inspection report forms. Discuss findings with and perform additional analysis at the request of the Industrial/Commercial &amp; Illicit Discharge Control Subcommittee.</li> </ul>	This task is based on SWMP.	\$20,000	Ongoing
<b>ICD-4. Conduct Outreach and Training:</b> <ul style="list-style-type: none"> <li>Identify a target audience (agency, business groups or industrial/ commercial associations), select appropriate forum for outreach under the direction of the Industrial/Commercial &amp; Illicit Discharge Control Subcommittee. Conduct outreach or training activity(s) on a biannual or more frequent basis. When common objectives exist, coordinate training or outreach events with other General Program subcommittees.</li> </ul>	This task is based on the SWMP.	\$15,000	06-30-2003
<b>ICD-5. Assist with NPDES Permit Requirements, Reports, Budgets and Evaluation of Industrial Discharge Control Activities:</b> <ul style="list-style-type: none"> <li>Support the meetings of the Industrial/Commercial &amp; Illicit Discharge Control Subcommittee and work groups. Prepare reports, budgets and other items necessary for administering this component and ensuring NPDES Permit compliance. Evaluate effectiveness of component through business surveys, analysis of agency annual report submittals and Regional Board staff's reviews. Based on evaluation, suggest policy and procedure improvements.</li> </ul>	This task is based on the SWMP.	26,000	Ongoing
<b>Total Budget</b>		\$124,000	



## ***Appendix C: Pollutant Reduction Plans***

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**Table C1- Diazinon Pollutant Reduction Plan: FYs 2001/02 and 2002/03**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

Area of Activity	Specific Tasks	Schedule	Conducted by:
<b><i>Municipal Activities</i></b>			
<b>MA-1:</b> Survey agency use of insecticides	<ol style="list-style-type: none"> <li>1) Conduct survey of insecticide use by municipal employees or contractors.</li> <li>2) Assess results of survey and develop a plan to minimize the potential for municipal use of insecticides to impact storm water quality.</li> <li>3) Begin implementation of recommended activities</li> </ol>	<ol style="list-style-type: none"> <li>1) FY 01/02</li> <li>2) FY 01/02</li> <li>3) FY 01/02</li> </ol>	<ol style="list-style-type: none"> <li>1) Municipalities/ Program</li> <li>2) Municipalities/ Program</li> <li>3) Municipalities</li> </ol>
<b>MA-2:</b> Train municipal employees who use insecticides about insecticide-related surface water toxicity, proper use and disposal of insecticides, and less-toxic methods of prevention and control.	<ol style="list-style-type: none"> <li>1) Conduct survey of established training requirements for municipal employees who use insecticides. Report on results.</li> <li>2) Assess results of survey and develop a plan to augment existing training activities.</li> <li>3) Implement training activities</li> </ol>	<ol style="list-style-type: none"> <li>1) FY 01/02</li> <li>2) FY 01/02</li> <li>3) FY 01/02</li> </ol>	<ol style="list-style-type: none"> <li>1) Municipalities/ Program</li> <li>2) Planning Comp.</li> <li>3) Municipalities/ Planning Comp.</li> </ol>
<b>MA-3:</b> Integrated Pest Management (IPM) practices, policies, or ordinances.	<ol style="list-style-type: none"> <li>1) Review established IPM practices, policies, or ordinances. Determine if additional practices, policies or ordinances should be developed. Submit written report on findings and recommended actions to Regional Board.</li> <li>2) Compile examples of IPM practices, policies, and ordinances and provide to member agencies. Assist member agencies with implementation as appropriate.</li> <li>3) Implement recommendations from Task 1.</li> </ol>	<ol style="list-style-type: none"> <li>1) FY 01/02</li> <li>2) FY 01/02</li> <li>3) FY 01/02</li> </ol>	<ol style="list-style-type: none"> <li>1) Municipalities/ Program</li> <li>2) Planning Comp.</li> <li>3) Municipalities</li> </ol>

**Table C1- Diazinon Pollutant Reduction Plan: FYs 2001/02 and 2002/03**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

Area of Activity	Specific Tasks	Schedule	Conducted by:
<b>Outreach</b>			
<b>OR-1 Outreach to Residents:</b> Continue to develop and distribute information to the general public on pesticide-related toxicity, proper use and disposal of pesticides, and less-toxic methods of pest prevention and pest control.	1) Support "Our Water, Our World" point of purchase campaign. 2) Develop distribution plan for insecticide related outreach materials. 3) Implement distribution plan	1) FY 01/02  2) FY 01/02  3) FY 01/02	1) PI/P Comp.  2) Municipalities and PI/P Comp.  3) Municipalities and PI/P Comp.
<b>OR-2 Outreach to Commercial Facilities:</b> Provide information to selected businesses (e.g., restaurants, and supermarkets) about insecticide-related surface water toxicity, proper use and disposal of insecticides, and less-toxic methods of prevention and control.	1) Select business sector and develop or adopt outreach material 2) Distribute Material in conjunction with Industrial/Commercial Inspection Program	1) FY 01/02  2) FY 02/03	1) II&ID Comp. / Planning Comp. 2) Municipalities
<b>Develop Partnerships</b>			
<b>DP-1 PCOs:</b> The Program will contact licensed applicators in the county, and will work with those who are willing, to set up a program to minimize water quality impacts from structural pest control applications.	1) Contact licensed applicators and coordinate development of IPM approach 2) Begin implementation of IPM approach	1) FY 01/02  2) FY 02/03	1) Planning Comp.  2) Planning Comp.
<b>DP-2 HHW facilities:</b> Continue to support and promote household hazardous waste collection as an important insecticide disposal option for residents.	1) HHW info on P <sup>2</sup> Outreach material. 2) Conduct meeting(s) with HHW staff to discuss additional opportunities for coordination. 3) Begin Implementation of activities developed in Task 2.	1) Ongoing 2) FY 01/02  3) FY 01/02	1) PI/P Comp. 2) Planning Comp.  3) Program or municipalities as appropriate
<b>DP-3 Agricultural Commission:</b>	1) Conduct meeting(s) with County Agriculture staff to coordinate development of outreach for PCOs.	1) FY 01/02	1) Planning Comp.

**Table C1- Diazinon Pollutant Reduction Plan: FYs 2001/02 and 2002/03**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

<b>Area of Activity</b>	<b>Specific Tasks</b>	<b>Schedule</b>	<b>Conducted By</b>
<b><i>Monitoring</i></b>			
<b>M-1:</b> Use monitoring and science to investigate local impacts and sources.	1) Develop insecticide application/runoff model. 2) Track long term trends in storm water toxicity and insecticide concentrations (will be included in long-term monitoring plan)	1) FY 01/02 2) Ongoing	1) Monitoring Comp. 2) Monitoring Comp.
<b><i>Regulatory</i></b>			
<b>R-1:</b> Participate in the pesticide regulatory processes as appropriate.	1) Provide written comments to Regional Board, U.S. EPA and California Department of Pesticide Regulation as appropriate. 2) Provide monitoring data to Regional Board, U.S. EPA and California Department of Pesticide Regulation as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Monitoring Comp.
<b><i>Coordination</i></b>			
<b>C-1:</b> Coordinate implementation of the PRP.	1) Establish work group to coordinate implementation across components, develop reporting forms and assist municipalities. 2) Coordinate with BASMAA, the California Storm Water Quality Task Force and the Urban Pesticide Committee as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Planning Comp.
<b><i>Evaluation</i></b>			
<b>V-1:</b> Evaluate implementation of the PRP	1) Review each of the action items and develop and conduct evaluations as appropriate. 2) Report on the results of the evaluations to the Regional Board	1. Annually 2. Annually	1. Planning Comp. 2. Planning Comp.

**Table C2- Mercury Pollutant Reduction Plan: FYs 2001/2, 2002/3 and 2003/4**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

<b>Area of Activity</b>	<b>Specific Tasks</b>	<b>Schedule</b>	<b>Conducted by:</b>
<b><i>Municipal Activities</i></b>			
<b>MA1 Fluorescent Bulb Recycling</b>	1) Conduct survey of fluorescent bulb recycling practices currently employed by municipalities.  2) Assess potential for improvement in recycling practices.  3) Implement improved practices	1) FY 02/03  2) FY 02/03  3) FY 03/04	1) Municipalities  2) Municipalities  3) Municipalities
<b>MA2- Mercury Reduction Policies/Ordinances</b>	1) Assess feasibility of implementing purchasing policies to reduce the use of mercury containing products.  2) Implement activities from assessment as appropriate.	1) FY 02/03  2) FY 03/04	1) Municipalities  2) Municipalities
<b><i>Outreach</i></b>			
<b>OR1- Outreach to Businesses:</b> Work with business community to increase level of fluorescent lamp recycling.	1) Identify obstacles to increased fluorescent lamp recycling. 2) Work with appropriate entities to try to minimize obstacles.	1) FY 02/03 2) FY 02/03	1) Planning Comp. 2) Planning Comp.
<b>OR2- Outreach to Residents:</b> Develop and distribute information to the general public on mercury related hazards, proper use and disposal of mercury containing products, and mercury free alternatives.	1) Develop mercury related outreach program 2) Conduct public outreach	1) FY 02/03 2) FY 03/04	1) PI/P Comp. 2) PI/P Comp. and/or Municipalities
<b><i>Partner with Other Agencies</i></b>			
<b>P1- Household Hazardous Waste:</b> Continue to support and promote household hazardous waste collection as a mercury disposal option for residents.	1) HHW info on P <sup>2</sup> Outreach material. 2) Conduct meeting(s) with HHW staff to discuss opportunities for coordination. 3) Begin implementation of activities developed in Task 2.	1) Ongoing 2) FY 01/02  3) FY 02/03	1) PI/P Comp. 2) Planning Comp. 3) Program or municipalities as appropriate

**Table C2- Mercury Pollutant Reduction Plan: FYs 2001/2, 2002/3 and 2003/4**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

<b>Area of Activity</b>	<b>Specific Tasks</b>	<b>Schedule</b>	<b>Conducted by:</b>
<b>P2- Green Business Program:</b>	1) Evaluate funding Green Business Program 2) Assess potential for improving Green Business Program's fluorescent bulb recycling component 3) Promote Program's and municipalities' use of Green Businesses 4) Promote public's use of Green Businesses	1) FY 01/02 & 02/03 2) FY 01/02 3) Starting 02/03 4) Starting 02/03	1) II&ID Comp. 2) II&ID Comp. 3) Planning Comp. and Municipalities 4) PI/P
<b><i>Regulatory Involvement</i></b>			
<b>R1:</b> Participate in the mercury TMDL process.	1) Attend mercury TMDL meetings as appropriate. 2) Provide written comments to U.S. EPA and the Regional Board as appropriate. 3) Support legislation to reduce mercury use.	1) Ongoing 2) Ongoing 3) Ongoing	1) Planning Comp. 2) Planning Comp 3) Planning Comp
<b>R2:</b> Fluorescent Bulb Recycling	1) Encourage the Department of Toxic Substances Control to promote recycling of fluorescent bulbs through revisions to Universal Waste Rule.	1) Ongoing	1) Planning Comp.
<b><i>Monitoring</i></b>			
<b>M1:</b> Use monitoring and science to investigate local impacts and sources.	1) Conduct survey of stream sediments to assess concentrations and loading of mercury. 2) Conduct additional surveys or special studies as appropriate.	1) FY 01/02 2) As appropriate	1) Monitoring Comp. 2) Monitoring Comp.
<b><i>Coordination and Evaluation</i></b>			
<b>CE1:</b> Coordinate implementation of the mercury PRP.	1) Coordinate implementation across components. 2) Coordinate with BASMAA, the Regional Board, and U.S. EPA as appropriate.	1) Ongoing	1) Planning Comp.
<b>CE2:</b> Evaluate implementation of the mercury PRP	1) Review each of the action items and develop and conduct evaluations as appropriate. 2) Report on the results of the evaluations to the Regional Board	1) Annually 2) Annually	1) Planning Comp. 2) Planning Comp.

**Table C3- Copper Pollutant Reduction Plan: FYs 2001/2 and 2002/3**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

<b>Area of Activity</b>	<b>Specific Tasks</b>	<b>Schedule</b>	<b>Conducted by:</b>
<b><i>Brake Pad Partnership</i></b>			
<b>B-1:</b> Brake Pad Partnership	1) Contribute funds to support Brake Pad Partnership effort.	1) FY 01/02 & 02/03	1) Planning Comp.
<b><i>Municipal Activities</i></b>			
<b>MA1: Architectural uses of copper</b>	1) Assess feasibility and effectiveness of reducing the use of copper in roofs or gutters. 2) Implement actions based on results of assessment.	1) FY 01/02 2) FY 02/03	1) New Development and Monitoring Comp. 2) Municipalities
<b>MA2: Street Sweeping</b>	1) Continue street sweeping in accordance with Municipal Maintenance Performance Standard.	1) Ongoing	1) Municipalities.
<b>MA3- Outreach to Businesses:</b> Conduct outreach to selected business sector (e.g., metal finishers, pool maintenance, auto repair) regarding BMPs to reduce copper discharge.	1) Select Business Sector and Develop Outreach 2) Distribute material in conjunction with Industrial/Commercial inspection program	1) FY 02/03 2) FY 03/04	1) II&ID Comp. 2) Municipalities
<b><i>Monitoring</i></b>			
<b>M-1:</b> Use monitoring and science to investigate local impacts and sources.	1) Track long term trends for copper concentrations in storm water. (Will be included in long-term monitoring plan.) 2) Conduct special studies as appropriate	1) Ongoing 2) As appropriate	1) Monitoring Comp. 2) Monitoring Comp.
<b><i>Coordination</i></b>			
<b>C-1:</b> Coordinate implementation of the CMP.	1) Coordinate implementation across components. 2) Coordinate with BASMAA, the Brake Pad Partnership, and others as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Planning Comp.
<b><i>Evaluation</i></b>			
<b>V-1:</b> Evaluate implementation of the CMP	1) review each of the action items and develop and conduct evaluations as appropriate. 2) report on the results of the evaluations to the Regional Board	1) Annually 2) Annually	1) Planning Comp. 2) Planing Comp.

**Table C4- PCBs Pollutant Reduction Plan: FYs 2001/02 and 2002/03**

**These plans will be replaced by new plans when available according to the reissued NPDES permit's requirements**

<b>Area of Activity</b>	<b>Specific Tasks</b>	<b>Schedule</b>	<b>Conducted by:</b>
<b><i>Monitoring</i></b>			
<b>M-1:</b> Use monitoring and science to further investigate local impacts and sources.	1) Conduct survey of stream sediments to assess concentrations and loadings of PCBs. 2) Conduct follow-up activities to track sources of PCBs 3) Assess potential for ongoing discharges of PCBs from industrial facilities or other sources. 4) Develop a plan to reduce discharges of PCBs in runoff from the county.	1) FY 01/02 2) FY 01/02 3) FY 01/02 4) FY 02/03	1) Monitoring Comp. 2) Monitoring Comp. 3) Monitoring Comp. 4) Monitoring Comp.
<b><i>Regulatory</i></b>			
<b>R-1:</b> Participate in the PCB TMDL process as appropriate.	1) Provide written comments on draft documents the Regional Board as appropriate. 2) Provide monitoring data to the Regional Board as appropriate.	1) Ongoing 2) Ongoing	1) Planning Comp. 2) Monitoring Comp.
<b><i>Evaluation</i></b>			
<b>V-1:</b> Evaluate implementation of the PRP	1) reviewing each of the action items and develop and conduct evaluations as appropriate. 2) report on the results of the evaluations to the Regional Board	1) Annually 2) Annually	1) Planning Comp. 2) Planing Comp.



## ***Appendix D: Figures***

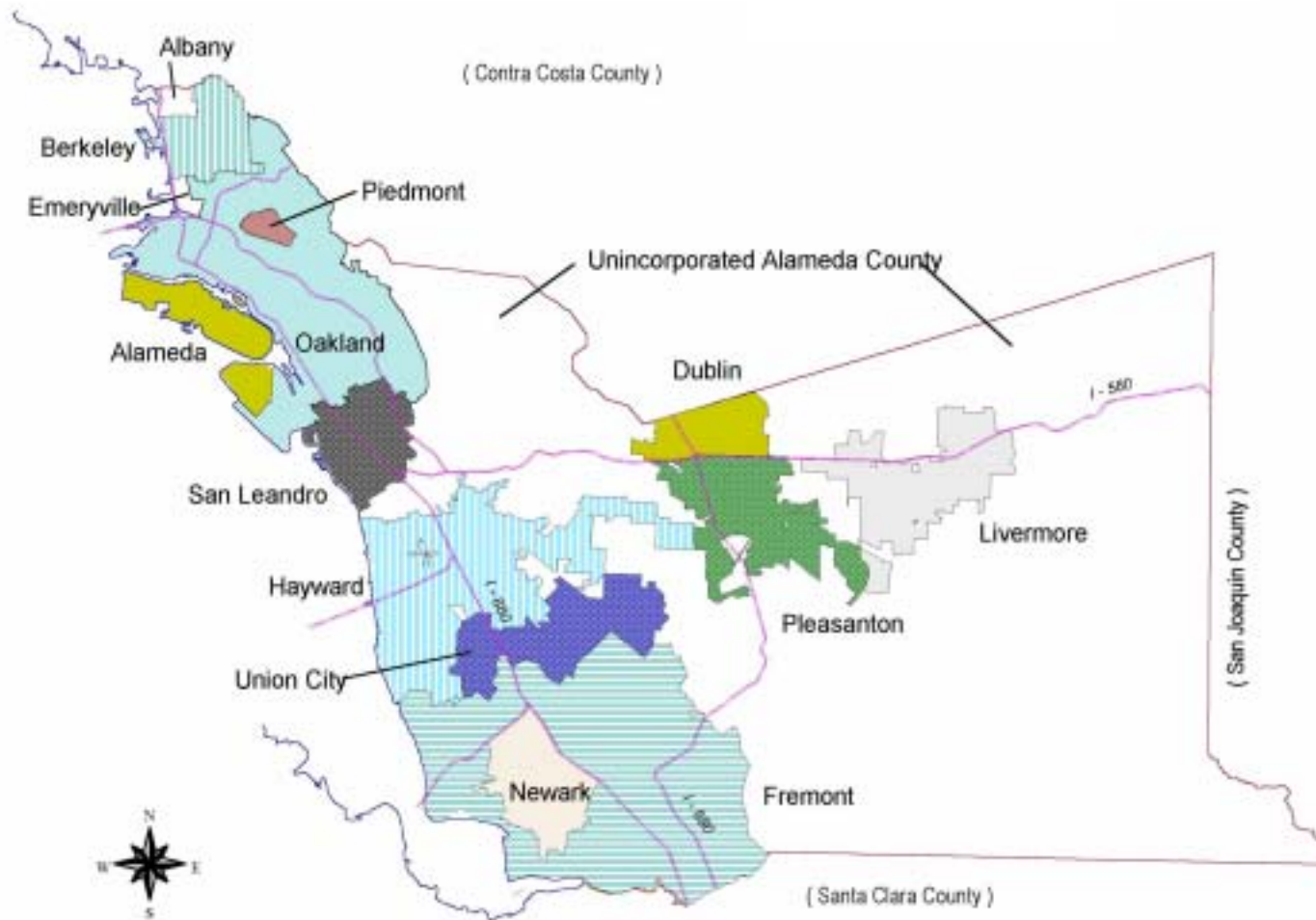
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**Figure D-1. Alameda County Municipalities**

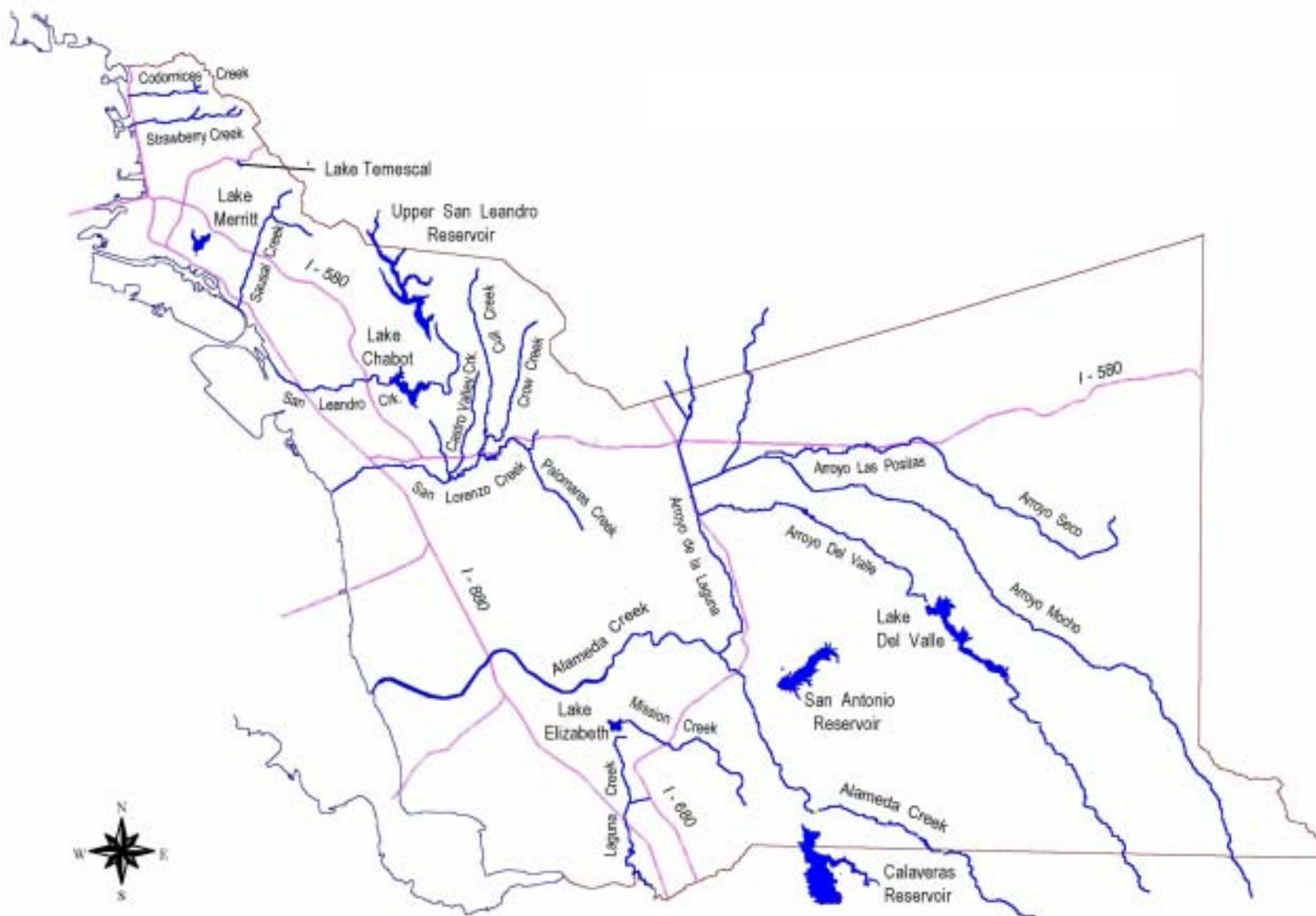
**Figure D-2. Major Open Creeks and Waterbodies in Alameda County**

**Figure D-3. Boundaries of Alameda County watersheds**

**Alameda County Municipalities**  
**Figure D-1**



**Major Open Creeks and Waterbodies in Alameda County**  
**Figure D-2**



**Boundaries of Alameda County Watershed**  
**Figure D-3**

